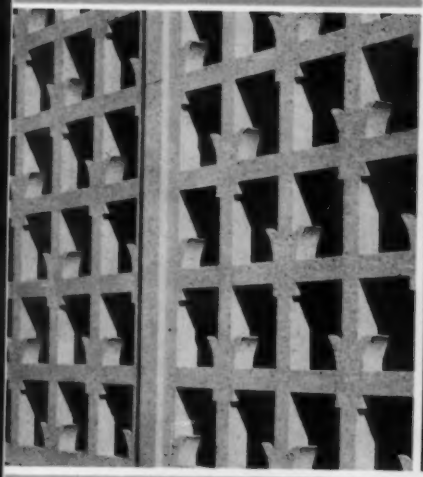
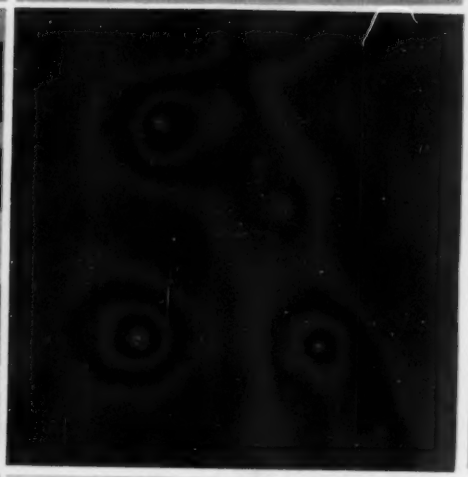
CONCRETE





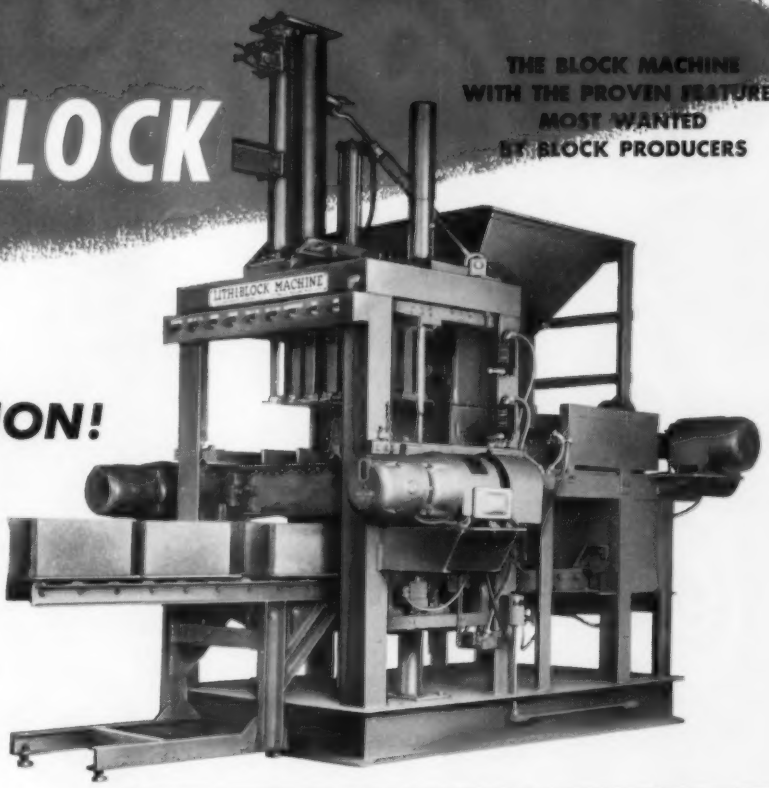
OUR 52ND YEAR

Serving the Concrete Industries

JUNE 1956

LOOK WHAT'S HAPPENED TO LITH-I-BLOCK

THE BLOCK MACHINE WITH THE PROVEN FEATURES MOST WANTED BY BLOCK PRODUCERS



more **SPEED!**

more **POWER!**

more **PRODUCTION!**

NOW

HYDRAULIC or AIR POWERED!

BONUS QUALITY

LITH-I-BLOCK

MADE ONLY ON THE LITH-I-BLOCK MACHINE

ROTA-POSED® AGITATION

No Agitator Grids Needed — Rearrange pins to any combination of blocks — Fills mold in a fraction of the time formerly required.

MICRO-JUSTABLE® VIBRATION

Calibrated adjustable weights allow accurate pinpoint selection of any intensity desired from zero to maximum.

HYDRAULIC POWER PACKAGE

Produces 12.5% more power than used with other block machines.

GUIDED PALLET SUPPORT AND STRIPPER

Extra heavy shafts guide pallet support and stripper freely but rigidly in their vertical travel — assuring perfect alignment.

UP TO 1000 BLOCKS PER HOUR

10 Seconds per cycle — 6 cycles per minute. (Hydraulic 3-block machine — from actual block plant tests)

4-POINT HEIGHT CONTROL

Built in — at no extra cost — the most positive height control on the market.

QUICK-CHANGE MOLD BOX

The entire machine can be changed from one size block to another in a matter of minutes.

SALES AND SERVICE THE WORLD OVER

LITH-I-BAR COMPANY

HOLLAND • MICHIGAN

ONE PIECE OF EQUIPMENT OR A COMPLETE PLANT LAYOUT

LITH-I-BAR CO. HOLLAND, MICH.

Send me latest bulletins on Lith-I-Block Machine.

NAME_____ TITLE_____

COMPANY_____

ADDRESS_____

CITY & STATE_____

JUNE, 1956

CONCRETE

Vol. 64, No. 6 • EST. 1904 • PUBLISHED MONTHLY BY CONCRETE PUBLISHING CORP. • 400 W. MADISON ST., CHICAGO 6, ILL. • Central 6-8822

FEATURES FOR THIS MONTH

DEPARTMENTS

WILLIAM M. AVERY, EDITOR DONALD T. PAPINEAU, Publisher DONALD C. WHITE, Manager Advertising Sales

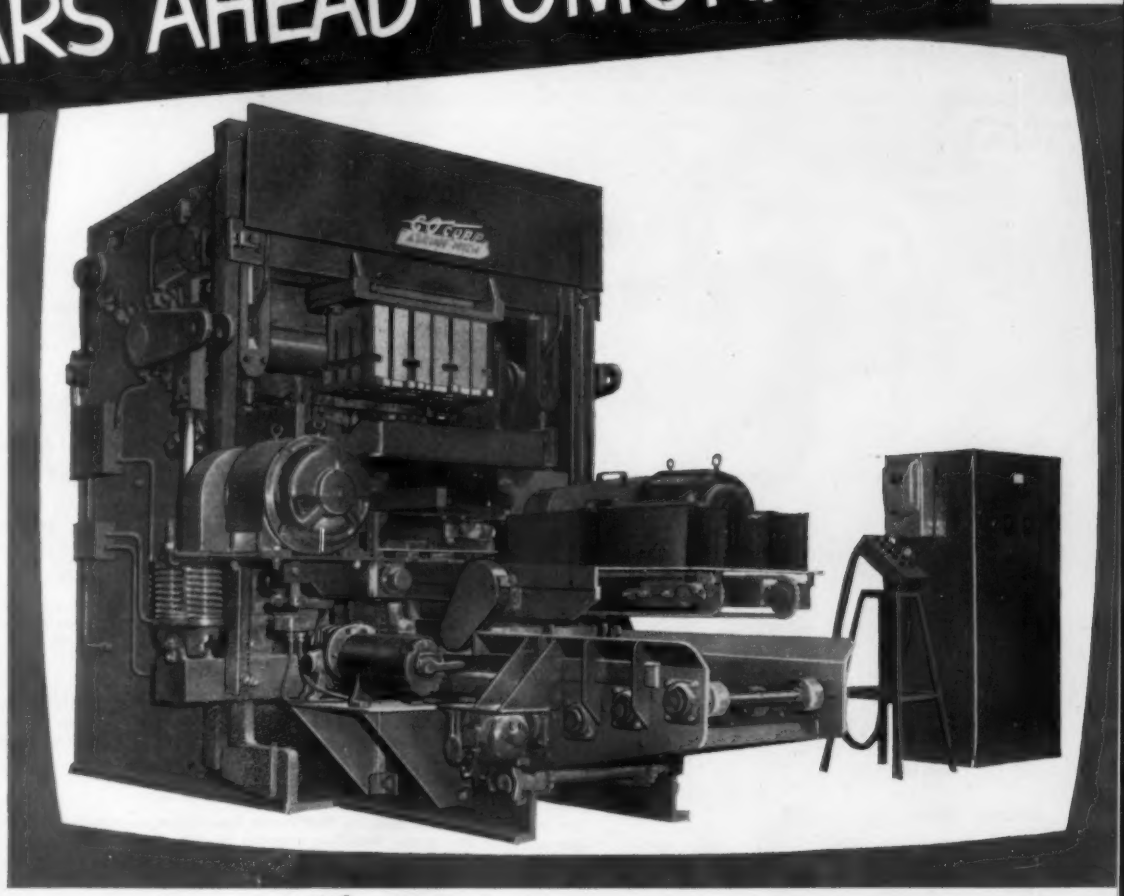
NBP

Advertising Representatives: Porter Wylie & Co., 114 East 13th St., New York 3, N. Y., Phone: Gramercy 5-3581; Crawford L. Elder, 2500 El Venado Drive, Puente, Calif., Phone: Oxford 44-116; Clarence L. Morton, 294 Washington St., Boston 3, Mass., Phone: Liberty 2-8538. Subscription Price: $4.00 a year in the United States and its possessions. One dollar additional for postage elsewhere. Single copies, 50 cents each. Accepted as controlled circulation publication at Mendota, Ill.

BPA

Keep YEARS AHEAD TOMORROW

WITH THE *NEW*



Hydraulic GOCORP "TRUSTEE"

NO DRAWING BOARD DREAM BUT THOROUGHLY FIELD TESTED—THE GOCORP, 3 at a time, PLAIN PALLET, "TRUSTEE" IS READY TO GO TO WORK FOR YOU NOW!

CONSIDER THESE FACTS!!!

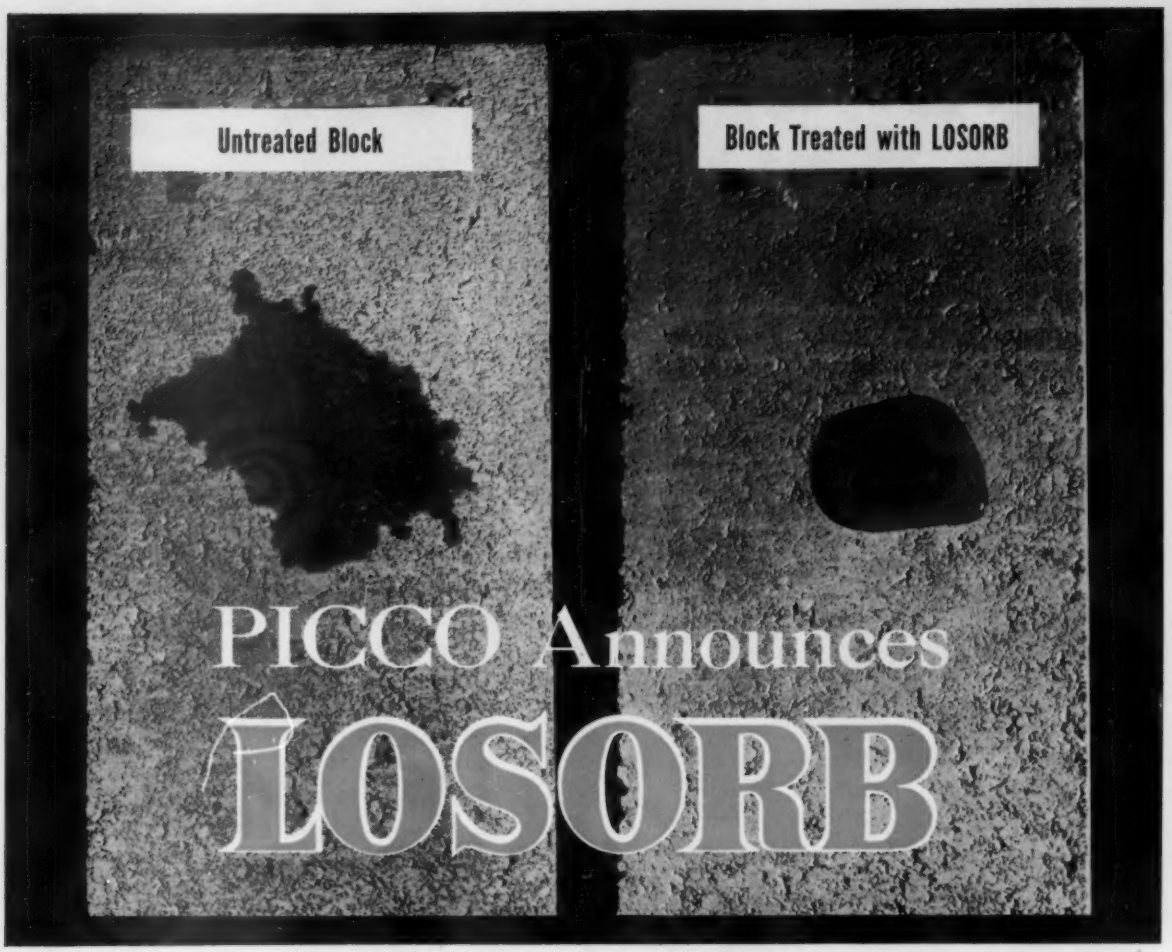
- **HIGHER PRODUCTION**—Up to 1100 good blocks per hour, with many aggregates, *without abusing the machine.*
- **TOP QUALITY BLOCKS**—Fewer culls in production • Fewer rejects on the job • Variable cycle—for complete flexibility and constant control of quality • Accurate height control.
- **LOWER MAINTENANCE**—Hydraulic operation means fewer wearing parts • Smoother operation • The elimination of cams, cam followers and gears means big maintenance savings for you.
- **QUICK MOLD CHANGE**—Change full height molds in about 20 minutes—to other heights in about 30.
- **RUGGED CONSTRUCTION**—Heavy duty frame with heavy plate cross bracing — Heavy duty bearings — 5" dia. cross shafts • The "Trustee" is built to last.
- **NO BRAKE FAILURE**—"Trustee" vibrator motors are 10 HP plug reversing type • Designed for frequent stops and starts • No brakes to cause trouble.

The "Trustee" will accommodate, without alteration, molds of the majority of plain pallet machines now in use. You can have all the advantages of the modern *hydraulic* "Trustee" and protect your mold investment too!

Ask about the new GOCORP "Jet"—the 2½ X small brother to the "Trustee".

The "Trustee" machine does **not** replace or succeed the famous GOCORP "Senior" and "King" models.

GO CORP
ADRIAN-MICH.
403 Grace Street Adrian, Michigan



MOISTURE-PROOFING ADDITIVE

for concrete and cement materials

Now you can moisture-proof your concrete products by the simple addition of a small amount of LOSORB to the mix. The photograph above shows clearly the amazing effectiveness of Losorb. The blocks are identical except for the Losorb—water was poured on both simultaneously—and the picture shows the imperviousness of the treated block.

With this treatment you can produce water-tight concrete blocks with which to build walls so impervious that they can be painted inside without danger of blistering and peeling due to passage of moisture through the concrete. Losorb materially reduces the cost of providing water-tight building exteriors, and eliminates the need for any other waterproofing above grade.

In addition, Losorb makes the mix more plastic, homogeneous and easy to work, acts as a lubricant in the moulding operations, and minimizes cracks.

Losorb is easy to use—simply add a small percentage (2% to 4%) to the mix. No other change in processing is necessary to give your blocks the decided advantage of *waterproof!*

Pennsylvania Industrial Chemical Corp.
Clairton, Pennsylvania

Plants at:
Clairton, Pa.; West Elizabeth, Pa.; and Chester, Pa.
Sales Offices
New York, Detroit, Chicago, Boston, Los Angeles
Philadelphia, Pittsburgh, Cincinnati

PENNSYLVANIA INDUSTRIAL CHEMICAL CORP. (C)
Clairton, Penna.

Please send me information on LOSORB.

Name_____
Position_____
Company_____
Address_____

Right to Left
FRED NETH
President
WALTER NETH
Sales Manager
OTTO NETH
Plant Superintendent
PAUL KLEMENS
Asst. Sales Manager

Columbia's SERVICE

BEGINS WITH YOUR FIRST INQUIRY

From your first letter, wire or phone call, the skill, knowledge and experience of everyone on Columbia's staff is at your disposal! Regardless of *what* your problem involves — plant layout, technical advice or mechanical assistance—a factory-trained Columbia representative will be in your plant within 24 hours.

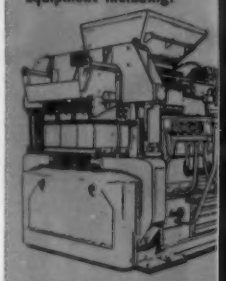
Columbia engineers, combining years of practical experience in the field of concrete block machinery, are always available to help you work out your most complex manufacturing processes and details.

At Columbia, service neither starts nor stops at the time of purchase. It begins with your *first inquiry* — and continues for the life of your machine.

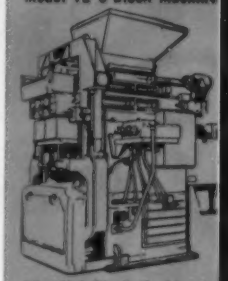
FASTER PARTS SERVICE. Because Columbia's plants in Vancouver and Mattoon, Illinois, are strategically located near air and rail centers, regular and emergency parts can be shipped immediately to any part of the United States.

If you are planning a plant expansion, a new plant, a machine installation—or would like to add concrete block production to your present business—contact us and we will send you a representative immediately. There's no obligation. Phone OXford 4-1501.

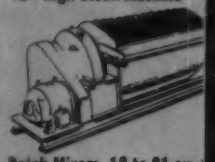
Columbia Builds a complete Line of Concrete Block Plant Equipment including:



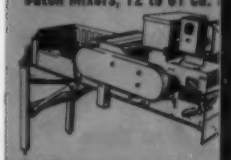
Model 12 3-Block Machine



12"-High Block Machine

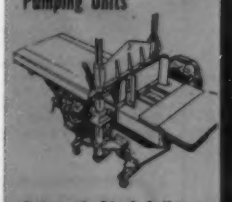


Batch Mixers, 12 to 81 cu.



Pallet Cleaners and Oilers

Pumping Units



Automatic Block Splitter

Feed Drawer Agitators
Power Rollaways
Skip Hoists
Racks
Turntables

Columbia MACHINE

Home Office: 107 S. GRAND, VANCOUVER, WASHINGTON

Factory Branch and Warehouse at Mattoon, Illinois.

District Offices in: **Wisconsin, Illinois, South Carolina, Mississippi, Florida, New Jersey, Virginia, California, Massachusetts, Texas, Montreal, Toronto, Vancouver, British Columbia.**

Housing Milestone

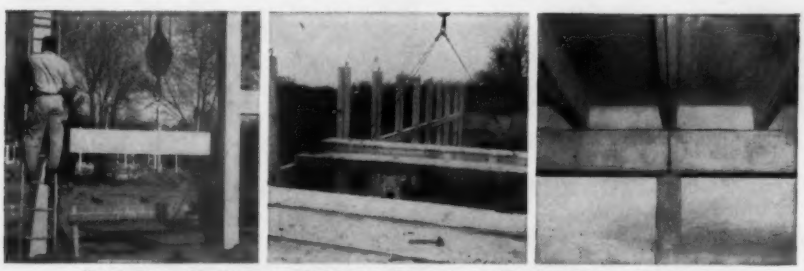
Precast 'Incor' Concrete Framing Cuts Erection Time and Cost on Big Philadelphia Housing Project

● Philadelphia, City of Homes, writes a bright, new page in the record of low-rent housing progress by providing comfortable, fire-safe dwellings for 412 families in its 500,000-sq.-ft. Liddonfield Housing Project, at a cost of less than $8. per sq. ft. of floor area.

Use of precast 'Incor' concrete columns, floors and roof decks for the 52 two-story buildings made possible assembly line speed in erecting the 20-ft.-wide units, ranging in length from 150 to 200 ft., at the rate of two a week.

All units were fabricated with 'Incor' 24-Hour Cement for fast, economical production and erection. You *know* what 'Incor'* will do . . . always dependable high early strength fits into well-scheduled, assembly-line production, assuring maximum output from the form investment . . . smooth-working mixes speed placing, improve appearance . . . sound reasons for insisting on America's FIRST high early strength portland cement.

*Reg. U.S. Pat. Off.



First step is erection of two-story columns and spandrels. Next, 3-ft.-wide precast floor channel slabs are placed across building's full width. Right, under side of floor—smooth concrete surfaces only require painting.

PHILADELPHIA HOUSING AUTHORITY
LIDDONFIELD HOUSING PROJECT

Architects:
LIDDONFIELD ARCHITECTS OF PHILADELPHIA

Civil Engineers:
BARTON & MARTIN
Philadelphia

General Contractor:
STOFFLET & TILLOTSON
Philadelphia

Precast Members Made and Erected by
FORMIGLI CORPORATION
Berlin, N. J. • Philadelphia, Pa.

LONE STAR CEMENTS COVER
THE ENTIRE CONSTRUCTION FIELD

LONE STAR CEMENT CORPORATION

Offices: ABILENE, TEX. • ALBANY, N.Y. • BETHLEHEM, PA.
BIRMINGHAM • BOSTON • CHICAGO • DALLAS • HOUSTON
INDIANAPOLIS • KANSAS CITY, MO. • NEW ORLEANS • NEW YORK
NORFOLK • RICHMOND • WASHINGTON, D.C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 18 MODERN MILLS, 38,000,000 BARRELS ANNUAL CAPACITY

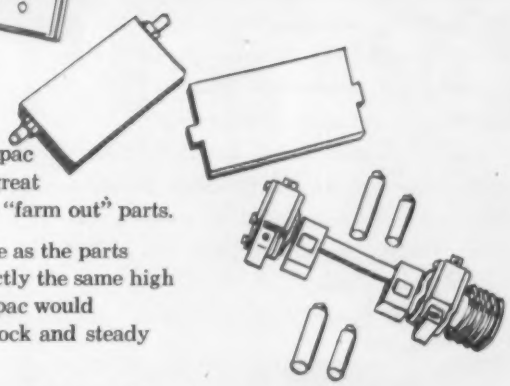
all BESSER PARTS *are made right here...*

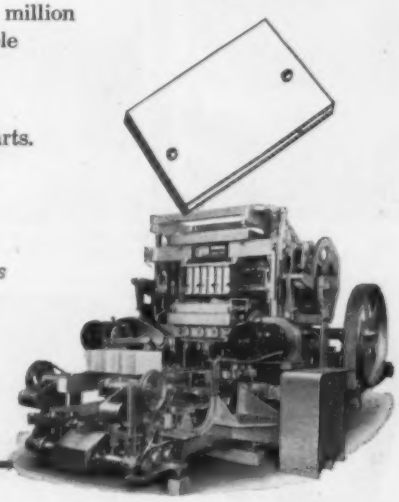
The same engineers and skilled mechanics who design and build the famous Besser Vibrapac produce all parts for the machine . . . right in this great Besser plant at Alpena, Michigan. Our policy is not to "farm out" parts.

Genuine Besser Parts are identically the same as the parts used for the original equipment. They are made to exactly the same high standards. They have to be. Otherwise your Vibrapac would not give you the high output of quality block and steady uninterrupted performance for which it is noted.

To insure quality control, Besser invested more than a million dollars in a Heat Treat Department. Quality control is impossible if the parts are "farmed out". As a result, Genuine Besser Parts fit perfectly, last longer, cost you less.

Get the *most* from your Vibrapac with *Genuine* Besser Parts.





BESSER Company

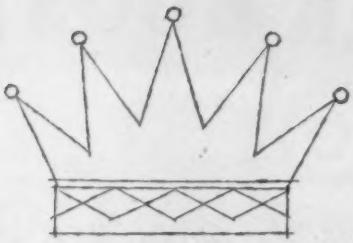
BOX 127, ALPENA, MICHIGAN, U.S.A.

Complete Equipment for Concrete Block Plants

BESSER Genuine PARTS

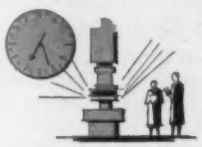
GENUINE **VIBRAPAC** *PARTS ARE MADE ONLY BY BESSER*

A 8800-1PBC

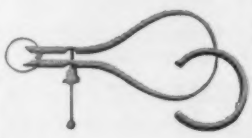


for superb mixer performance

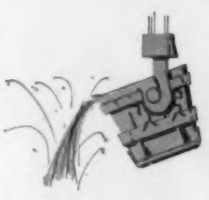
research



design



manufacturing



it takes all three

.....and you get them

with a SMITH

Performance — the only real yardstick when it comes to concrete and other dry material mixers — depends on three significant concepts of quality.

Research is the first.

Design and *Manufacturing* follow.

Each one is required — if the final performance is to be of superlative caliber.

Only one organization in the world — The T. L. Smith Company — is known internationally as the foremost designer and manufacturer of mixers exclusively since 1900.

Today Smith is recognized not only as the industry's pioneer, but also as the leader in mixer research and design.

Today Smith follows the goal of the founder just as it has for more than half a century: to build the finest quality products possible, without one single deviation in any detail.

This obsession for quality has paid off for users. If you talk to a Smith owner, he'll tell you why.

SMITH

THE T. L. SMITH COMPANY 2881 North 32nd Street, Milwaukee, Wisconsin
711 Industrial Road, Lufkin, Texas

Affiliated with Essick Manufacturing Company, Los Angeles, California

A8857-1P

This is the 132nd of a series of ads, featuring leaders of the Concrete Products Industry who are stepping up block production with Besser Vibrapac machines.

Another BESSER BOOSTER

"Our Vibrapacs produce as well today as they did when installed 9 years ago"

(right) Two Vibrapacs in the Chambersburg plant of the Nitterhouse Concrete Products Co.

(below) Special truck-mounted device for loading and unloading cubed block.

(above) Yard scene showing stockpiles of block, all made on Vibrapacs.

(left) Block are handled with a Besser Bridge Crane Block Cuber. No manual lifting.

This very sincere comment was made by T. K. Nitterhouse, owner of Nitterhouse Concrete Products Company, Chambersburg, Pennsylvania.

Mr. Nitterhouse's first Vibrapac was installed in 1946, and another one was added a year later. Today, both machines are still giving very satisfactory performance. As this enthusiastic block maker puts it: *"The Vibrapac is the best high production block machine available for producing high quality units of all sizes".*

In addition to standard wall units, Nitterhouse also produces concrete floor and roof systems, pre-stressed beams and split block under the trade name of "Random Rock". Several years ago a second plant was started at Windber, Pennsylvania, where another Vibrapac was installed.

Frankly, don't you think this preference for Vibrapacs implies complete satisfaction?

BESSER COMPANY · Box 127, Alpena, Mich., U.S.A.

Complete Equipment for Concrete Block Plants

(left) T. K. Nitterhouse pointing to a system of pre-stressed Vibrapac Block beam at the Chambersburg plant. His son William is standing in the background.

NATIONAL HOUSING CENTER, WASHINGTON, D.C., where Besser maintains a permanent exhibit of concrete masonry. Be sure to visit this fine display.

BESSER VIBRAPAC

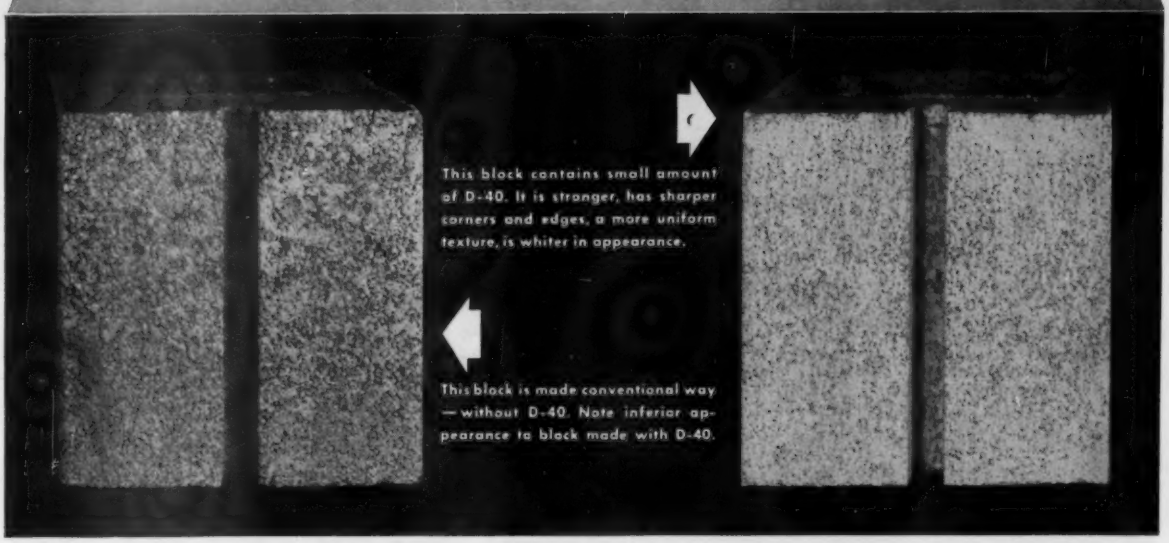
first in concrete block machines

A 8807-1PBC

Use D-40 in block manufacture to—

INCREASE PROFITS

IMPROVE QUALITY CONTROL



Low-cost, high active D-40 has proved over the years to be most effective in up-grading cast concrete products

The increase in plasticity, imparted by D-40 to the wet mix, results in a better flow into the molds; provides more uniform dispersion of the cement; gives smoother, lighter-colored products with fewer rejects.

Only ½ to 2 ounces of economical, ready-to-use D-40 is required per bag of cement.

For complete information, sample and technical help, write or call the Oronite office nearest you.

ORONITE CHEMICAL COMPANY

EXECUTIVE OFFICES: 200 Bush Street, San Francisco 20, California

SALES OFFICES

450 Mission Street, San Francisco 5, Calif.
30 Rockefeller Plaza, New York 20, N. Y.
Carew Tower, Cincinnati 2, Ohio
714 W. Olympic Blvd., Los Angeles 15, Calif.
20 North Wacker Drive, Chicago 6, Illinois
Mercantile Securities Bldg., Dallas 1, Texas

ORONITE CHEMICAL COMPANY

3654

4 trucks or 40

2-way radio means more profit for any size fleet!

If you've thought 2-way radio was only good for the big ready-mix operator with dozens of trucks—take a look around. Some of the most enthusiastic radio users have fleets of fewer than 10 mixers.

It isn't the number—it's the *efficiency* that tells the profit story. Radio dispatching helps you run trucks at peak productivity by trimming out the wasted miles and minutes.

Check these ways a Motorola 2-way radio communication system can save you money and bring in new business:

- ***By rerouting mixers, when necessary, to alternate customers—on short notice, while trucks are en route.***
- ***By freeing your heavy trucks from partial loads.***
- ***By releasing pre-mix plant crews immediately following the day's final pour.***
- ***By slashing down-time on disabled mixers through speedy repairs.***
- ***By giving better service to contractor customers via radio relay of instructions.***
- ***By eliminating all telephone calls from drivers.***

When you are buying radio, you'll soon see why ready-mix companies choose Motorola *more often* than all others *combined.* One big reason is that it's built for rugged use —designed to *outlast* several trucks. Let a Motorola Engineer show you the many other reasons why Motorola tops the field. He'll also show you how Motorola 2-way radio will quickly pay for itself by cutting costs . . . then go on to earn extra profits for you every year. Write, phone, or wire TODAY.

MOTOROLA

2-WAY RADIO

MOTOROLA COMMUNICATIONS & ELECTRONICS, INC.
A SUBSIDIARY OF MOTOROLA, INC.
4501 AUGUSTA BOULEVARD • CHICAGO 51, ILLINOIS

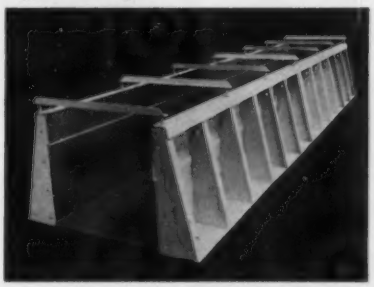
Motorola consistently supplies more mobile and portable radio than all others combined.
Proof of acceptance, experience and quality.
The only COMPLETE radio communications service—specialized engineering . . . product . . . customer service . . . parts . . . installation . . . maintenance . . . finance . . . lease.
"The best costs you less—specify Motorola."

PRESTRESSED CONCRETE BRIDGE BEAMS

in many sizes WITH A SINGLE 300 to 400-FOOT INSTALLATION OF...

Now-mass production in a big way!

The newest addition to the Form-Crete line (illustrated at the right) has been carefully engineered to provide the utmost flexibility for mass production of all sizes of rectangular bridge beams. Designed to withstand maximum operating and casting deflection loads the basic forms produce a rectangular beam 33 inches wide and 36 inches deep. Additional casting pallets are available in several widths and heights, enabling the manufacturer to cast all practical sizes of rectangular bridge beams utilizing the same single set of side forms. This economy feature, coupled with the uniform accuracy of all Form-Crete castings are but two of the many advantages that contribute to Form-Crete superiority. Investigate this new way to greater prestressed concrete product profits.



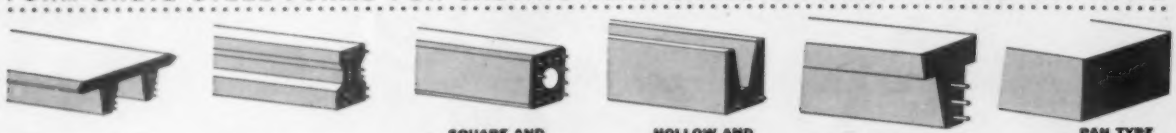
These Form-Crete rectangular bridge beam side forms and pallets are manufactured in 10-foot lengths for handling ease and are designed to produce a product that meets the demands of modern construction.

SEND FOR **FORM-CRETE BULLETIN 100**

PF-4

FOOD MACHINERY
AND CHEMICAL CORPORATION
FLORIDA DIVISION
LAKELAND, FLORIDA

FORM-CRETE STEEL FORMS FOR CASTING REINFORCED OR PRESTRESSED CONCRETE



DOUBLE "TT" SLABS | BRIDGE BEAMS | SQUARE AND OCTAGONAL PILING | HOLLOW AND SOLID LINTELS | SINGLE "T" JOISTS | PAN TYPE BRIDGE DECKS

. . . has these MIX MORE . . . POUR MORE PROFIT MORE features . . .

SWING-OUT HOPPER swings in for charging—swings out for discharge so concrete can come through big UNOBSTRUCTED opening in full, easily controlled stream.

TROUBLE-FREE FLOATING DRIVE that absolutely eliminates **ALL** the troubles of ordinary rigid drives. Simplest chain take-up of all—only one nut to turn.

EXTRA LARGE DIAMETER DRUM HEAD—DEEP "L" SECTION BLADES for greater material contact—more mixing action per each drum revolution. Assures faster, more thoro, more efficient mixing of any slump concrete.

HANDIEST, SIMPLEST CHUTE ARRANGEMENT OF ALL. Easier to handle on any kind of pour—no matter how tough the job.

TRANSCRETE AVAILABLE 4 SIZES—3½ to 7-yard MIXING CAPACITIES. Write Construction Machinery Company, Waterloo, Iowa

Write For Your FREE COPY TODAY

'56 TRANSCRETE CATALOG

CONSTRUCTION MACHINERY CO.
Waterloo, Iowa

INDUSTRY NEWS

Carl Olsen Dies Of Heart Attack

C. Olsen

Carl Olsen, 60, director of material and method service for the Besser Company, Alpena, Michigan, died of a heart attack at Oslo, Norway, recently. Mr. Olsen was en route to set up a Besser machine at the German Industries Fair at Hanover, Germany, and was stricken while taking a brief vacation at Oslo. He had been associated with Besser Company since 1942.

■

House Gives Green Light To 13-Year Highway Plan

The House of Representatives has passed and sent to the Senate the Fallon Bill, (H.R. 10660), authorizing a $51 billion, 13-year national roadbuilding program. It was the most massive peacetime public works project ever approved by the House; in fact, it authorized the biggest national capital investment in world's history.

The House approved the Federal investment of approximately $25 billion in 13 years for completion of the construction of the Interstate System of Highways, a 40,000-mile route, designated as strategically essential for national defense, that reaches each State and most of the Nation's principal cities.

The Federal Government's investment will represent about 90 per cent of the estimated total cost; the States will contribute the additional $2 billion, making it, in all, a $27 billion program.

Primary responsibility for the Interstate construction, as well as the other programs continued and expanded by the Bill, is to be vested in the States. This follows procedure regularly adopted by Congress since 1916.

The House accepted the "pay-as-you-build" principle and adopted a 16-year schedule of new and increased road user tax levies calculated to yield $38 billion. Members okayed the principle that the levies should fall on the chief beneficiaries of the highways.

■

ARBA Executive Vice President

Major General Louis W. Prentiss (USA Ret.) recently assumed the duties of executive vice president of the American Road Builders' Association. General Prentiss succeeds General Eugene Reybold (USA Ret.).

Oops Again!

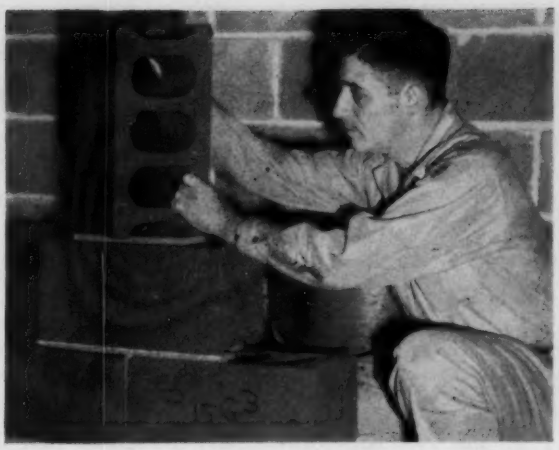
• This mishap, similar to one we pictured in our February issue, occurred when the driver of the truck mixer stalled his engine while negotiating a steep grade. Too sudden application of the brakes to check backward motion caused the load of concrete to shift enough to upend the whole works. Fortunately nobody was hurt and damage to the truck was minor.

Calendar . . .

JUNE 17-19	Florida Concrete and Products Association—Annual Convention—Tides Hotel—Redington Beach, St. Petersburg, Florida.
JUNE 17-22	American Society for Testing Materials—59th Annual Meeting and 12th Apparatus Exhibit—Chalfonte-Haddon Hall—Atlantic City, New Jersey.
JUNE 19-20	Ohio Ready Mixed Concrete Association—Annual Meeting—Hotel Hollenden—Cleveland, Ohio.
JULY 30-AUG. 1	National Cinder Concrete Products Association—Summer Meeting—Chalfonte-Haddon Hall—Atantic City, New Jersey.
AUGUST 13-16	National Ready Mixed Concrete Association—Committee Week—Jefferson Hotel—St. Louis, Missouri.
OCTOBER 1-3	National Ready Mixed Concrete Association—Semi Annual Board of Directors' Meeting—Del Monte Lodge—Pebble Beach, California.
OCTOBER 20	New Jersey State Concrete Products Association—Annual Dinner—Swiss Chalet—Rochelle Park, New Jersey.
OCTOBER 22-26	National Safety Council—44th National Safety Congress and Exposition—Conrad Hilton, Congress, Morrison, and La Salle Hotels—Chicago, Illinois.
	1957
JAN. 28-FEB. 2	American Road Builders' Association—55th Annual Convention—International Amphitheater—Chicago, Illinois.
FEBRUARY 11-14	National Ready Mixed Concrete Association—27th Annual Meeting—Statler Hotel—Los Angeles, California.
FEBRUARY 25-28	Concrete Industries Exposition—10th Biennial Exposition—Kiel Auditorium—St. Louis, Missouri.
FEBRUARY 25-28	National Concrete Masonry Association—37th Annual Convention—Kiel Auditorium—St. Louis, Missouri.

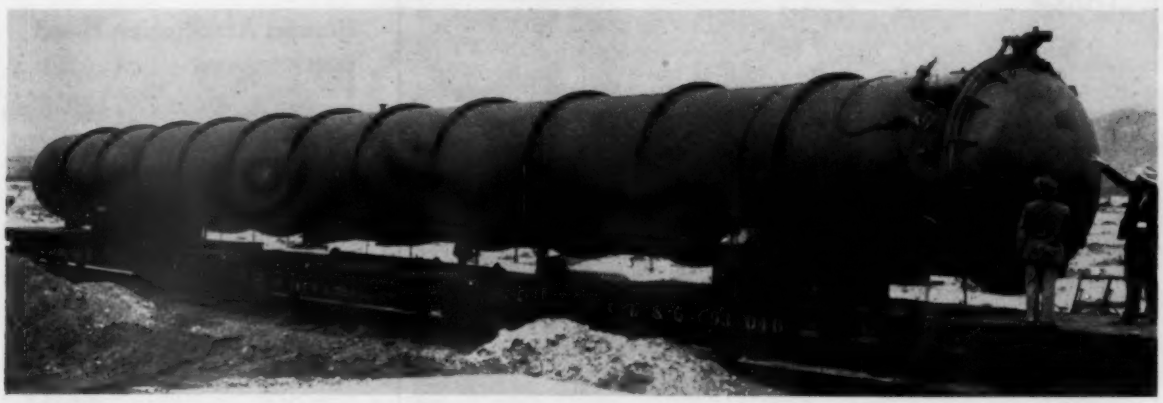
Not-So-Objective Research?

● The picture at the right was sent to us not long ago by the Illinois Institute of Technology, along with a release that identifies the product shown as a lightweight ceramic block developed at Armour Research Foundation. We believe firmly in research, and we're happy that the gentlemen at Armour have succeeded in making a ceramic block that looks almost as good as a concrete block. But if their research effort is strictly objective, it seems to us they would be well advised to go about selling this product of their ingenuity without making invidious comparisons between it and the material it so closely resembles. Reference in the Institute's release to "the drab concrete block" scarcely represents the precise and unemotional sort of terminology we have come to associate with research organizations.



Texas Ready-Mix Assn.

● At its annual convention in Dallas the Texas Ready Mixed Concrete Association elected a new slate of officers to serve for the coming year. Shown at the right, they are: Weaver Cunningham, West Texas Concrete Products, Inc., president; James B. Bumgardner, North Side Ready Mix Concrete Company, second vice president; and Floyd J. Childs, Childs Ready Mix Concrete, first vice president.



Old Southwest Acquires New Look

● One of the oldest towns in the Southwest got its first look at modern block plant curing equipment when this 9-foot by 121-foot high-pressure-steam cylinder was unloaded at the Hovey Concrete Products Company's plant in Santa Fe, New Mexico. The 135,000-pound tube was shipped from Tulsa, Oklahoma, where it was fabricated by McNamar Boiler & Tank Company. It is being installed as part of a $100,000 expansion program for the Hovey plant. It will be the second such installation to be completed in New Mexico.

Everybody's Business

CONSTRUCTION

- Continuing strong demand for building and engineering structures boosted contract awards for future construction in the 37 eastern states to a total of $2.4 billion in the month of April, according to F. W. Dodge Corporation. This was a record April, up 4 per cent over April 1955, and the second highest contract figure for any month in the history of the reporting service. A new first-four-months record of $8.5 billion was also established, this total being 13 per cent greater than the 1955 figure. The residential figure for April showed a 7 per cent gain over April 1955, and was also by a small margin the largest showing in Dodge history.
- *Fortune* magazine's annual survey of builders seems to indicate that 1956 home building may still surpass 1955, in spite of the slow start. Findings of the survey point to the conclusion that home builders may start 1,340,000 houses this year compared with 1,309,000 last year. Over half the builders queried plan more starts this year than in 1955, while only 20 per cent plan fewer. An even more encouraging indication is that two-thirds of the builders expect the home building pace at the end of 1956 to be maintained in 1957, and 31 per cent of them expect another increase next year.
- The bright outlook for home building activity has received a mild shot of cold water from Walter W. McAllister, chairman of the Federal Home Loan Bank Board. He expresses grave fears that with the economy continuing at its present level of production, a home building rate in excess of 1.2 million units annually will run into shortages of labor, materials and mortgage funds.
- Another bullish indication for the immediate market outlook for concrete products is the remarkable increase in church construction activity. In 1955 total expenditures for religious buildings soared to $760 million, an increase of 25 per cent over 1954. Current indications are that the 1956 total may increase to $900 million.
- Operation Home Improvement seems destined to go over with a bang, judging from a recent survey finding that almost 15 million households have plans for making one or more home improvements within the next 12 months.
- A late spring in most sections of the country seems to have postponed the development of serious shortages of portland cement, but trouble spots began to show up almost as soon as the construction season opened. The Chicago area, for example, seems bound to suffer the most severe shortage in history.

TAXES

- The Bureau of Internal Revenue is taking a new, hard look at personal income tax returns on which deductions are claimed for unreimbursed business expenses such as travel and entertainment. It takes the position that if such expenses are reimbursable, the employee cannot deduct them from his taxable income, whether he chooses to collect or not. If you claim such deductions in the future, be certain that your company has a reasonable and consistent policy barring reimbursement.

LABOR

- The Supreme Court has ruled that a company ban on union organizing activities on its property is not necessarily an unfair labor practice prohibited by the Taft-Hartley Act. The justices hedged a bit, however, by saying that such bans are not "justified" if there is no other way for the organizers to reach the concern's employees.
- In another ruling the Supreme Court declared that a company which claims it can't afford a wage increase must, in certain cases, open its books if the union demands it. The Court held that if the argument of inability to pay increased wages is important enough to present in the first place, then it is important enough to require some sort of proof of its accuracy.

Vermiculite Institute Elects H. W. Steiff

H. W. Steiff

Harvey W. Steiff, Minneapolis, Minnesota, vice president of Western Mineral Products Company, was elected president of the Vermiculite Institute of Chicago, at the group's 15th annual convention held recently at Chandler, Arizona. Other officers include J. Brooks Robinson and J. A. Kelley named to the board of directors; W. J. Bein, vice president of Zonolite Company, Chicago, Illinois, re-elected treasurer; and Edward R. Murphy re-elected managing director.

■

Prestress Institute Publishes New Journal

A new quarterly technical publication, the *PCI Journal*, made its debut at the recent second annual convention of the Prestressed Concrete Institute. A major objective of the institute since it was organized in 1954, the new magazine is under the editorial direction of Dr. A. M. Ozell, associate professor of civil engineering, University of Florida.

The first issue, which was distributed at the convention, contained articles by T. Y. Lin, Paul Zia, J. W. Cochrane and Dr. Ozell.

■

Named Association Head

C. V. Harker

Charles V. Harker, president of Mid States Concrete Products Company, Beloit, Wisconsin, has been elected president of the Flexicore Manufacturers Association of Columbus, Ohio. Mr. Harker will preside over the organization consisting of twenty-five manufacturers across this country, Phillipine Islands, Puerto Rico, and Canada for the next two years. The association furthers the development and use of Flexicore, a pre-cast concrete slab construction for floors and roofs.

Prolonged Mixing, Standing Detrimental to Concrete

Tests made and reported recently by the Bureau of Reclamation show how some of the properties of concrete vary with prolonged mixing and standing, and with the addition of water for tempering. Some of the conclusions drawn:

With prolonged mixing, regardless of whether it is continuous or intermittent, there is a significant decrease in slump and air content.

With either standing or mixing up to three hours, compressive strength increases. It also increases somewhat for air-entrained concrete if tempering follows mixing, but shows a decrease when tempering follows a standing period.

With prolonged mixing the modulus of elasticity varies directly with the compressive strength, but it begins to drop after one or two hours of standing.

Tempering of non-air-entrained concrete has only a slight effect on resistance to freezing and thawing. Tempering of air-entrained concrete seems to cause a reduction in resistance to freezing and thawing.

Tempering always seems to be accompanied by an increase in drying shrinkage. The broad conclusion reached in the Bureau's Concrete Laboratory Report No. C-802 is that the workability of overmixed concrete should not be restored by means of tempering.

■

Mo-Sai Precast Facing

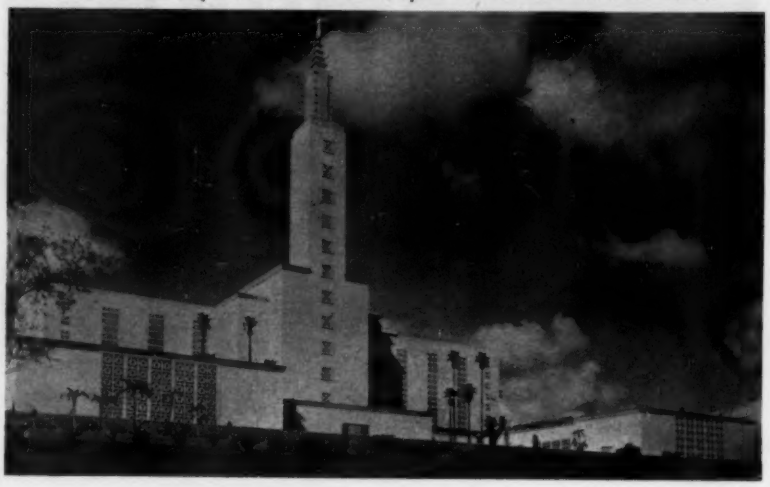
● The Temple of the Church of Jesus Christ of Latter-day Saints, Los Angeles, California, has attracted widespread attention because of its unique architectural treatment. There are more than 2500 separate pieces of Mo-Sai on the Temple facing. They average in size about 7 feet by 8 feet and are 2¼ inches thick, but some of the units are 14 feet in height, and are among the largest pieces of Mo-Sai ever cast. These units cover the entire 146,000 square feet of surface area on the building. All the units were precast in the Otto Buehner & Company plant in Salt Lake City, Utah.

Pipe Association Officers

● A new board of directors of the American Concrete Agricultural Pipe Association was elected at the organization's 6th annual convention in Denver. Left to right seated: Homer Peterson, Rockite Silo Company, vice president; J. J. Seale, Concrete Conduit Company, president; Bruce N. Spencer, Jr., Gifford-Hill-Western, Inc., vice president. Left to right standing: G. D. Williamson, Valley Concrete Pipe and Products Company, director; William B. Freeman, Lock Joint Pipe Company, treasurer; and Earl H. Eby, Elk River Concrete Products Company of Montana, director.

Prestress Installation

● Capri Home Builders, Inc. erected 5,000 square feet of roof area with these precast prestressed concrete "I" beams. Eighteen beams, each 9 inches by 24 inches by 67 feet, spaced 4 feet apart, span the 67 feet between walls.



Leased Radio Equipment Subject to New Rules

The National Ready Mixed Concrete Association has advised its members concerning some changes in radio licensing policies of the Federal Communications Commission. The association's executive letter contains the following information:

NEW OPERATIONS: The FCC will not grant licenses to applicants for wholly new facilities who contemplate the use of equipment leased from AT&T or its affiliates. This means that if you do not hold a radio license but apply for one in the future, you must either buy your own equipment or find other sources from which to lease equipment.

RENEWALS: If you now lease AT&T equipment and your radio license expires during 1956, you may continue to use the leased equipment and your renewal application will be granted for a four-year term. This will give you an opportunity to continue your present operations without interruption and work out your future plans during the four-year period. No lease arrangements will be permitted under the consent decree after 1961 in any event.

EXPANSION OF OPERATIONS: If you use equipment leased from AT&T in a presently licensed operation and file an application with the FCC to modify or expand your operations, the FCC will determine on a case-by-case approach whether to permit lease of equipment for the modified or expanded operation from AT&T. Presumably, the FCC will take into account the extent of any such proposed modification or expansion of operations.

These policies, the association points out, apply only to those who themselves hold licenses from the FCC and lease equipment from AT&T or its affiliates. They do not apply to those who use the AT&T common carrier radio services. The executive letter notes that the ready-mix producer may enter into an extension of an existing lease with AT&T for a period shorter than four years, obtain equipment from other sources or file an application to modify his license with the FCC at any time.

■

Material Service Elects New President

Irving Crown

Material Service Corporation, Chicago, Illinois, recently announced the election of Irving Crown as its president. Mr. Crown was one of the founders of the corporation in 1919, and served as executive vice president. He has been active in all phases of the company's operations, particularly in production and distribution.

Elect New Officers of New Jersey Products Assn.

At the recent annual meeting of the New Jersey State Concrete Products Association the following officers were elected to serve one-year terms: president, A. Faber, Faber Cement Block Company; vice president, T. Swales, Best Block Company; secretary, C. H. Ware, Rock-Crete Products, Inc.; treasurer, E. Schmitt, Hoffman Block Company.

The following were elected to serve on the board of directors: H. W. Bush, Bergen Building Block Company, for a 3-year term; J. Callahan, Multiplex Concrete Company, for a 2-year term; and N. Schlanger, Concrete Block of Irvington, for a 1-year term. W. J. Decker is executive secretary of the group.

At the election meeting it was announced that the association's second annual dinner-dance will be held on October 20 at the Swiss Chalet, Rochelle Park, New Jersey.

■

Concrete Diving Board Featured At Open House

A concrete diving board was one of the highlights of the 32nd annual engineers' open house at Kansas State College recently. The board was built by the college's civil engineering students to demonstrate properties of prestressed concrete. The board is 20 feet long, 18 inches wide and 2 ½ inches thick. It weighs more than 600 pounds.

Prestress Demonstration

● Nearly half a million people got to know more about prestressed concrete at the recent Annual Greater Miami Industrial Exposition. An exhibit, sponsored jointly by R. H. Wright & Son, Fort Lauderdale; Precast Corporation, Miami; and Schilling-Crissey Company, Miami, gave a live demonstration of testing a pretensioned joist. A 20-foot beam tensioned with four 5/16-inch-diameter strands was shown under a concentrated load of 2000 pounds, or the equivalent of 200 pounds per lineal foot. The purpose of the test was to show the capacity of prestressed concrete to resist reasonable loads without permanent deflection. A flow meter hanging to the right of the load made a graph recording of each loading and recovery.

NOT IN THE SPECS

Miami Sun Burn

Under the heading "Editor's Face Red" a contemporary magazine has apologized to its readers for reporting that the Construction Industry Manufacturers Association had held an uneventful meeting at Miami, Florida. Having attended a few hundred meetings of one sort or another in our day, we haven't the least doubt that this affair was probably as uneventful as any of them, and we just wish Rudolph the red-faced editor had stuck to his guns.

Stretching It A Bit

A recent issue of *Masonry Building* magazine points out that the mason contracting profession has received a boost as a result of the recent marriage of a Hollywood film actress to the proprietor of a European gambling joint. The reasoning seems somewhat obscure, but it appears to have something to do with the fact that the movie actress's father was once a bricklayer. With equal logic it could be argued that the carpenter contractor has received constant boosts for the last 2000 years because the founder of the Christian faith was a carpenter. Indeed, the second proposition seems by far the more reasonable.

This'll Kiln You

We attended the 50th annual convention of the Autoclave Building Products Association at Detroit, Michigan, last month. As we listened to the discussions we were struck by the exceptional care with which virtually every speaker struggled to pronounce the "n" in the world kiln. Since Americans are not generally noted for the precision of their speech, it seems particularly surprising that so many of them would go out of their way to enunciate a letter that is neither required by good usage, nor especially easy to handle in any case.

The whole matter reminds us of a sad little verse on the subject which we encountered some time ago in the house organ of one of the major producers of portland cement. Here it is:

His Name Was Biln

Once a kiln worker tending a kiln
Lost his footing and took a bad spiln;
When he came out as a clinker
His boss said, "That stinker
Wiln give a bad name to our miln."

Block That Pun(t)!

A prominent manufacturer of automatic high production block machines advises us that an 8-by 8-by 16-inch standard unit produced

on one of his machines recently won first place honors as "best tailored block" at a meeting of the Concrete Products Association of Washington. This prompted our publisher to comment that the block probably looked as though it had just stepped out of a mold box.

Disloyalty

We were one of a group of business paper editors who embarked from Midway airport in Chicago several weeks ago to attend a preliminary showing of Clark Equipment Company's new line of fork lift trucks at Battle Creek, Michigan. It was a foul day for flying, and after roaming around in the pea soup for a good many hours in search of a useable air port, we were more than happy when the pilot of our plane finally set us down at Fort Wayne, Indiana, and decided to call it a day. The plane was a chartered job owned and operated by an outfit called Purdue Airways, a circumstance which caused us to reflect that this was probably one of the few occasions in history when an Illinois man actually rooted for old Purdue to make a touchdown.

● "Just where are we getting that lightweight aggregate?"

Autoclavers Discuss Corrosion Problem

A spirited but inconclusive discussion of the corrosion problem was among the highlights of the 50th annual convention of the Autoclave Building Products Association. Held at Detroit April 23 to 25, the affair drew about a hundred producers of concrete block and sand-lime-brick.

The serious character of the corrosion problem was evidenced by an impressive volume of testimony indicating that some autoclave operators are sustaining serious financial loss due to the rapid deterioration of racks. Some producers also indicated that the quality of their products was being adversely affected by rust stains.

The corrosion discussion was headed up by a panel of interested individuals which included Fred Reinhold, Anchor Concrete Products, Edward Bauman, National Slag Association, Carl Menzel, Portland Cement Association, and W. J. Brull, Zenith Concrete Products.

A number of theories, none of them too well buttressed by evidence, were advanced to explain the rapid corrosion of racks taking place in some kilns, and the relatively minor effects noted in others. One producer made the assertion that formed steel racks, and racks made with rerolled steel, are an important contributing factor, while another suggested that the exhaust of gasoline engine lift trucks might be a factor.

There was a similar lack of agreement in respect to remedial measures. One producer reported that his corrosion problem disappeared when he adopted the practice of bringing condensate back to a settling tank and reusing it. Other producers, of course, believe that the reuse of condensate may actually be the cause of rack corrosion. Another producer attributed the absence of corrosion in his cylinders to his practice of admitting steam without exhausting air, while still others suggested that *this* practice might well be one of the principal causes of corrosion.

Mr. Reinhold reported that his company placed some aluminum racks in service about three months ago and that after 60 cycles of use they show no visible signs of deteriorating. The aluminum racks cost 2½ times as much as steel racks, and there is some question as to their ability to stand up under the rough usage that is bound to occur in a busy block plant.

Reference was also made to the practice of protecting steel racks by treating them once each month with a solution containing cement, fly ash and lime. The statement was made that a two-man crew could coat from 15 to 18 racks per day.

It was suggested that rust drip from pallets to block can be controlled by running pallets through a cleaning machine about once every three months, allowing a thin layer (perhaps 1/16 of an inch) of concrete to remain on one face of each pallet. When the side bearing this thin coating of concrete is turned downward it appears to prevent rust drip.

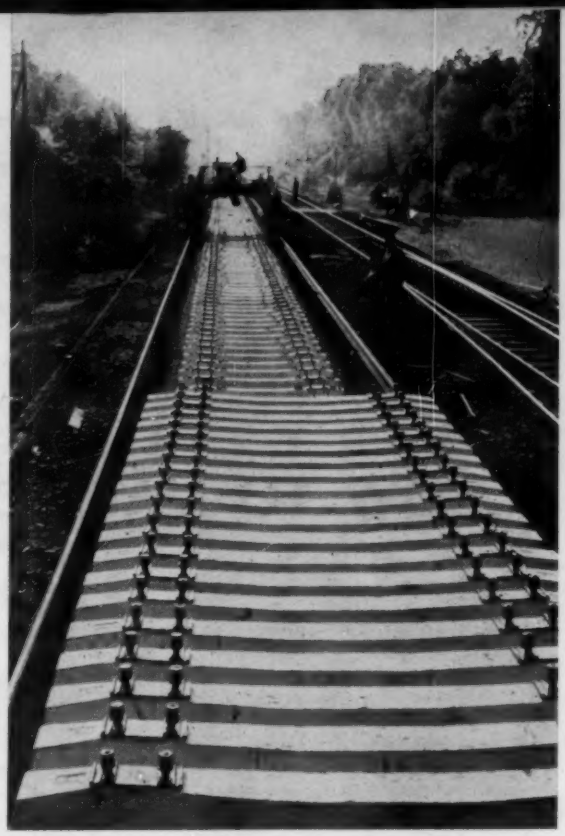
As a protective measure for the interior walls of autoclaves themselves, one producer mentioned the practice of cleaning cylinders weekly to remove all debris that might retain moisture and thus cause corrosion. This procedure, it was also pointed out, provides a highly desirable opportunity to check on the progress of corrosion.

A Canadian autoclave operator told of maintaining good control of corrosion by feeding 600-W cylinder oil into the main steam line at a rate of about six drops per minute. The oil is fed to the steam lines by means of a sight-feed lubricator. Steel racks subjected to this treatment are still in service after seven years.

The program of the Detroit meeting included talks by the following: C. A. Sirrine, Concrete Products Association of Michigan; Cedric Willson, Texas Industries; Walter Horn, Cinder Block, Inc.; John Pennachetti, Thorold Concrete Block, Ltd.; Richard Frazier, Anchor Concrete Products, Inc.; M. W. Ferguson, Pre-Shrunk, Inc.; Dr. George Kalousek, Owens-Illinois Technical Center; and Benjamin Wilk, Standard Building Products Company. A panel discussion regarding the design of an efficient autoclave curing system included remarks by John Selden, D. W. Tappan, Robert W. Molley, Morris H. Gross, and A. E. Grann.

Dale Cobb, Jackson Ready Mixed Concrete Company, and Leo J. Ryan, Ryan Builders Supplies, Ltd., were reelected president and vice president of the association. Ralph Cromis, Boice Builders Supply, was newly elected to the office of secretary-treasurer.

● LEFT: At their fiftieth annual convention in Detroit members of the Autoclave Building Products Association had an opportunity to inspect the high-pressure-steam curing plant recently placed in operation by Cinder Block Inc. BELOW: One of several panel discussions dealt with the the design of an efficient autoclave curing system. Members of the panel included John K. Selden, D. W. Tappan, Robert W. Molley, A. E. Grann and Morris H. Gross.



German Railroads Roll On Concrete

The German Federal Railroads have definitely decided on prestressed concrete ties for strength and long-range economy. The tie itself costs more than a wooden tie, but even one mile of concrete ties in place represents a substantial savings.

One of the few licensed makers, Beton und Monierbau AG of Duesseldorf, has supplied over 400,000 such units, using either 2 or 4 round ribbed steel rods to each tie. The rib reinforcements are about 2 inches apart, protruding from the rod about 3 millimeters and are claimed to provide complete bonding of steel reinforcement and concrete.

The steel reinforcement is bound with steel wire, called the "basket", and laid into sheet steel molds. These molds are arranged to hold the tension until the concrete has hardened and is able to absorb the stress itself. The ends of the rods are threaded and they are tensioned with nuts and provided with ground anchorage. Then tension is applied by hydraulic jacks, during which process the rod tension is measured, after which the molds are transported to the concrete mixing station where they are filled and vibrated.

After the vibration process is completed the filled molds are sent through curing kilns. The curing system provides quick hardening of the concrete which reaches a pressure resistance of 1,200 pounds per square centimeter after 16 hours of processing. At that point, the concrete is strong enough to take over the prestressing strain. The tie is then complete and is stored ready for use.

Quality tests are made jointly by the maker and the Bundesbahn when the tie is either 16 hours, 7 days or 90 days old. They include climatic tests, application of 0.5 ton weights falling from various distances, and application in series of 2 million times of loads varying from 1 to 8 tons. Tie breakage occurs at a load of about 98 tons per tie.

Bundesbahn requirements for concrete used in ties include pressure resistance of 1,440 pounds per square centimeter and a static bending and contraction fastness of 190 pounds in length. Tie ends are required to support 14 tons. Ruptures in the concrete are supposed to close again after load is removed, when the load does not exceed 12.4 tons on each of the tie heads supporting the rail. Support of a 45-ton load per tie is required; actually, the ties can support twice that requirement.

German concrete ties come in two sizes. One, type B53, is for normal width, the length being 2.75 yards. The tie heads, each 32 inches in length, rest entirely on the ground. The central piece of the tie, 28 inches in length, is unsupported above the ground. This type of tie uses 2 to 4 rods as reinforcement. The second type, B62, has heads of 30-inch length, with a 30-inch central piece also free above the ground. In this type 4 reinforcement rods are mandatory. For smaller or greater lengths, ties are made in one straight piece flat on the ground.

Normal weight of one concrete tie is about 576 pounds, which is said to secure the maximum of safety and quiet. This provides wider stretches of one-piece rail, which are welded together only every 9,600 yards when concrete ties are used. Railroad construction cost using concrete ties is not more than that using wooden ties. Production cost of concrete ties is higher than that of wooden ties, but savings in fixing rails on the ties make final costs about the same.

Rails can be fixed to concrete ties by nailing, or after inserting wooded pegs, by using screws. In general the same principles are maintained as in the use of either wooden or iron ties. This Bundesbahn uses special wide-gauge construction cars, each taking 20 concrete ties and carrying them forward on unfastened rails. The use of concrete ties has advanced the mechanization of railroad construction.

Since concrete ties, including fastenings, require replacement only about every 15 years, maintenance costs are substantially lower than for roadbeds using wooden ties. Other advantages include quieter operation of rolling equipment and superior safety features. Their successful use by public railroads has resulted in increasing use for streetcar tracks and for the small freight railroads operated by German industry.

At a recent meeting of concrete drain tile manufacturers, held under the sponsorship of the American Concrete Pipe Association, two able speakers collaborated in presenting some conclusive arguments to prove there can be no substitute for quality. Combined here, their presentations constitute a short course on . . .

HOW TO MAKE QUALITY DRAIN TILE

What is a high quality drain tile? One that will pass ASTM or other specifications for strength and absorption? Yes, but it's more than that. It must pass specifications and look good to prospective buyers. We must keep both these requirements in mind when selecting mixes, operating tile machines and curing tile.

Let's consider mixes and, briefly, machines and curing in that order.

Mixes

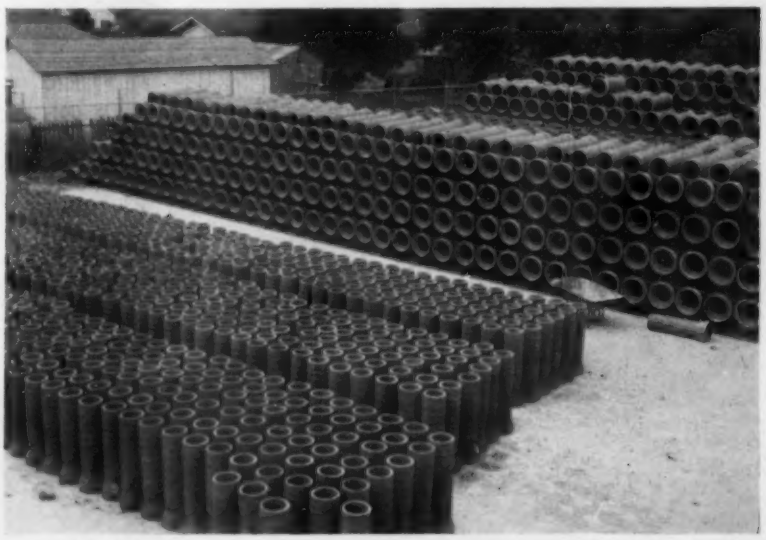
What are the requirements for a tile mix? In a broad sense, they are the same as for any concrete mix, either dry or plastic. Any concrete mix, to be satisfactory, must be workable, economical, and must produce concrete of a quality suitable for the job. First, we've got to have a workable mix, one we can place and finish properly. The main difference in dry and plastic mixes is that dry mixes can be placed only through the action of a machine such as the action of the packer head in a tile machine while a plastic mix, being more fluid, can be placed and finished by other means. The potential quality of the concrete made from either is determined by the water-cement ratio of the mix. And it is as important to keep the water-cement ratio in mind when making a dry mix as when making a plastic mix.

In dry-mix concrete we usually (but not always) get better concrete by putting in all the water we can work with in order to have enough water to hydrate the cement. But we can get too much water into a lean, dry mix the same as in a plastic mix.

Just remember that the water-cement-ratio law works in either a dry or plastic mix if we have thorough compaction of the concrete, and that we get compaction of a dry mix through the action of a machine instead of a puddling stick. Also, to get compaction in either dry or plastic mixes, we must start with a workable mix.

Although we've got to have a workable mix to make good tile, it doesn't help much to have a mix that works well if it costs too much. We've still got to make it into tile that we can sell at a profit. Nor can we use a mix that works well and is economical unless we can make tile with it that meet specifications and look good to prospective buyers. So let's consider workability, economy and quality of mixes, one at a time in that order.

How do we get a workable mix? The best starting point is an aggregate with proper gradation. If we start with the right aggregate, it is



● Only care and precision at every stage of the manufacturing process make it possible to place quality drain tile in the storage yard day after day.

relatively easy to combine with it the right amounts of cement and water to get an economical mix that works well and makes good tile. If we don't have the right gradation in the aggregate, we are apt to come up short on economy or quality or both.

Where do we start? A good place is with a sieve analysis of the aggregate to see if the gradation needs correction. Unfortunately, it often does. What usually is lacking in improperly graded aggregates are fine fines and coarse material, which are apt to be short on either or both ends.

And how can we correct these conditions without letting ourselves in for blending two or three different aggregates? Maybe we can't. We may have to do some blending. But won't that run costs up? Maybe. But it's not apt to be too bad if we have access to the different aggregates needed, and can work out a logical way of handling them and charging the mixer. If we were making high quality plastic concrete, we could expect to use two or more aggregates.

Proper gradation is so necessary because it's the best start toward getting the necessary workability to give the density needed for high strength and low absorption, and because it makes for economy and ease of production.

Although it would be fairly simple to work out a theoretically ideal gradation for a drain tile mix, it is useless to try to ignore the fact that sand and gravel varies from one pit to another, and often over a fairly wide range within a given pit. Let us instead consider the sieve analyses of three actual tile mixes and discuss the characteristics of each.

Sieve Size	Mix #1	Mix #2	Mix #3
#4	18%	20%	8%
#8	22%	17%	14%
#16	24%	19%	22%
#30	15%	17%	23%
#50	15%	15%	19%
#100	5%)	9%)	10%)
Pan	2%)7%	3%)12%	4%)14%
Fineness Modulus	3.9	3.7	3.2

The first thing we notice about Mix Number 1 is that a bulk of material is contained on the No. 8 and No. 16 sieves. These sieves are troublesome when large amount of material are retained on them. A harsh mix results which will require only a small amount of mixing water before we encounter slump in the concrete. Also, as the maximum amount of water is reached, we find the tile breaking as the cans are removed, or due to slight bumps or jars in the manufacturing process. This results from the harsh mix. It will also be noted that the fines (No. 100 screen and pan) are deficient as this mix contains about 7 per cent, whereas 10 to 15 per cent is preferable. The fineness modulus indicates the coarseness of the mix. In this example 3.9 would be considered good if the machine were able to handle it.

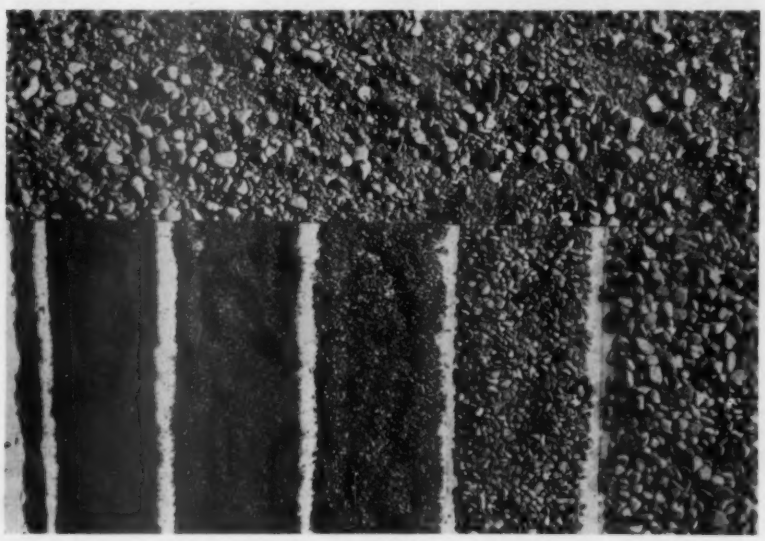
The material of Mix Number 2 is uniformly graded from the No. 4 screen down to the fines. It contains 12 per cent on the No. 100 sieve and pan which will meet the requirement of 10 to 15 per cent. This mix should give a dense, strong, workable concrete using a large amount of mixing water. The 3.7 fineness modulus should result in an economical mix.

Mix Number 3 is definitely lacking in coarse material on the No. 4 and No. 8 screens. However, you will notice that the rest of the mix is uniformly graded and that it contains 14 per cent fines. This mix would accommodate a large amount of mixing water, and if enough cement were added to utilize this water, it could make a quality tile. A big question mark should be hung over this mix, however, due to its low fineness modulus of 3.2.

Now, to review the three mixes: Number 1 is a coarse mix, but very poorly graded; Number 2 is a well-graded coarse mix which should give good results; and Number 3 is a well graded mix, which should make a quality product, but is of doubtful economy due to its fineness.

Now what does this mean to drain tile manufacturers? It means this. First, it is important to get the best possible gradation of materials. If these are within reasonable limits and there is still need for improvement, then there are only three other possibilities: increase the compaction, improve the curing facilities, or alter the cement factor until the desired quality is obtained.

Once we have the correct aggregate and mix design, we must figure out some way to get accurate measurements; we cannot hope to maintain uniformly high quality and ease of production without uniformly accurate measurement of materials. It is next to impossible to maintain accurate measurements by volume; variations in bulking of sand alone, due to variations in moisture content, can mess up our best efforts at volume measurement. Thus, some



● Well-graded aggregate, like the material pictured here, is an essential element in the production of all quality concrete, but is especially important in the manufacture of drain tile.

type of weigh-batching is indicated.

Just this word on mix economy: It takes more than a low cement factor to make an economical mix. Other factors include costs of aggregates, problems of handling and blending aggregates, rate of production, wear and tear on machinery.

And that gets to quality of mix. Basically, a high quality mix is one properly proportioned between well graded aggregate, cement and water. But quality of tile is so definitely tied in with machines and curing that a mix of high quality does not assure tile of high quality. A good mix is only the first step toward making a good tile.

Tile Machines

Here are some general precautions which should be observed in operating tile machines:

(1) Don't expect to continue making good tile without wearing out some jackets and packer heads.

(2) Don't expect to make good tile with an under-powered machine; get a motor big enough to pull it, even when there's coarse material in the mix.

(3) Don't expect to make good tile in sizes bigger than the machine will handle properly.

(4) Don't forget that you *can't* make good tile except with a machine heavy enough and properly adjusted to give needed compaction.

(5) Don't expect a tile machine to continue to do good work unless you take good care of it.

(6) To summarize: Don't *try* to make tile without a suitable tile machine. That may mean a sturdier machine and more powerful motor than you thought it would take. It means keeping the machine in good repair so you can give it hard usage to get proper compaction. And finally, note the repetition of that word compaction. You can't neglect compaction and make good tile.

● BELOW: This unretouched photo compares a clay tile (left) with a concrete tile. RIGHT: An indication of the considerable strength that well-made concrete drain tile can develop.

Curing

No phase of concrete work seems to be more misunderstood than curing. Curing means keeping concrete under the right conditions of moisture and temperature while it hardens. Concrete should be kept moist to prevent loss, usually by evaporation, of the mixing water. For best results, concrete should be kept at room temperature or higher during the curing period to facilitate hydration of the cement. Moist curing at room temperature takes about a week when normal cement is used in the mix. Since it usually is impractical to moist cure drain tile at room temperature for a week, we try to hasten the curing process by curing in steam rooms.

And that's where a lot of people get fooled; they put in a steam room and think their curing worries are ended. Having a steam room does not guarantee good curing, any more than having a banker for a neighbor guarantees that you will always have plenty of money. You've got to have a good steam room and use it right for it to be fully effective.

There seems to be little uniformity in steam rooms or in the way they are used. Some tile manufacturers use steam rooms as drying ovens, especially in cold weather. You see all sorts of flame thrower gadgets drying out the tile in steam rooms on cold days. Better not make tile in cold weather unless you can manage some other way to keep them from freezing. Other plants use dry steam that causes the surface of the tile to dry out and turn a light color in a few hours. Some take warm, moist tile out of steam rooms and stack them outside in the cold; this invites trouble from fast shrinkage.

Does this mean that we should give up steam curing and go back to stacking tile under shade trees? Not at all. It does mean that all of us should learn more about steam curing.

Just remember that making high quality tile is relatively easy if you have the right aggregate, work out the right mix, have the right machine, use right production and curing methods. If you are lacking in any of these requirements, maybe you can make necessary adjustments. If you can't make adjustments, it might be well to consider going into some other kind of business. You can substitute for some things, but in the tile business there is no satisfactory substitute for quality.

■

R. O. Decker Launches New Products Firm

A new concrete products firm known as Steps Company has been formed at Irvington, New Jersey. Its output will include machine-made lintels, beams and roof slabs, as well as precast concrete steps. Richard O. Decker is the owner of the venture. The new firm's products and facilities were inspected by New Jersey block producers at an open-house affair several weeks ago.

■

January Cement Production

Production of finished portland cement in January 1956, as reported to the Bureau of Mines, Department of the Interior, totaled 21,440,000 barrels — an increase of 6 per cent over January 1955. Mill shipments totaled 13,273,000 barrels — a decrease of 0.3 per cent compared with January 1955 — while stocks of 25,456,000 barrels of finished portland cement on hand January 31, 1956 were 9 per cent more than on the same date last year. Clinker production during the month totaled 25,153,000 barrels — an increase of 10 per cent over the January 1955 figure.

It isn't a problem, fortunately, that all producers of ready-mixed concrete are going to have to solve tomorrow. But the heat is on to cool concrete for certain uses during extremely hot weather. This discussion of some of the production problems which cooling introduces was presented at the last annual convention of the National Ready Mixed Concrete Association. It is reprinted here to alert our readers to some of the things to look out for when . . .

The Ice Man Cometh

By HARRY IRWIN
The Warner Company

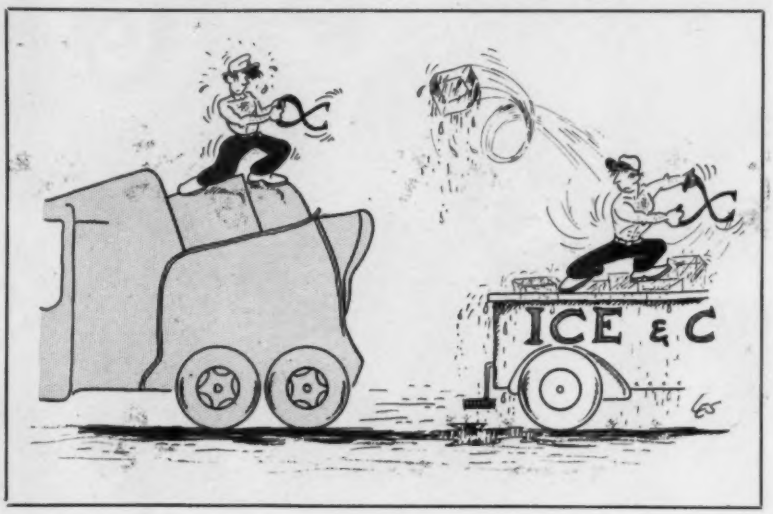
Up to last summer the problem of cooling concrete had never been given serious consideration in connection with ready-mixed-concrete operations in the Philadelphia area. Until that time all our experience and our study of concrete temperatures had to do with the heating of the material in the winter months. This problem had necessarily been solved due to the fact that in recent years more and more concrete has been produced, delivered, and placed during the winter months.

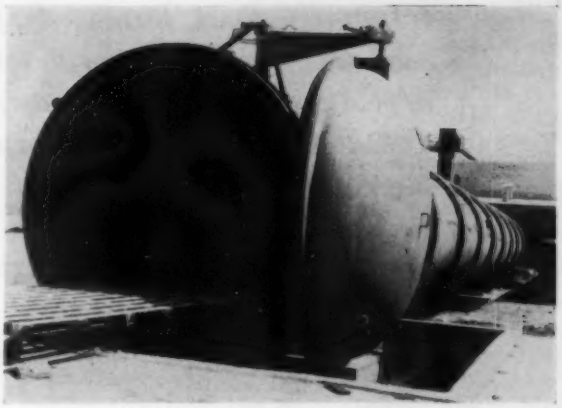
Last summer was a particularly hot one in many parts of the country. It was hot in the Philadelphia area. Concrete temperatures in the high eighties were common and there were some instances when concrete temperatures reached the nineties. When these conditions were encountered, additional water was added to the concrete to take care of the higher recession in slump. Most concrete is sold on a strength basis and test cylinders have indicated that the additional water had little or no effect on the strength of the concrete. It seemed fair to assume this extra water was dissipated by evaporation or some other means, and did not enter into the water-cement ratio.

The first time we had to face the problem of cooling concrete was in supplying concrete for the foundation of a 500-foot-high, 20-foot-diameter concrete chimney. The job involved an approximate 35-minute haul and required 850 cubic yards of 3000-psi air entrained concrete. It was feared that excessive shrinkage would result, due in part to the mass of the concrete, and in part to the temperatures experienced with concrete being delivered to other sites on the same job.

A study was made of means of reducing the temperature of the concrete. All cement going into concrete produced at Warner Company plants is tested by an independent testing agency, and a limit has been placed on the temperature of the cement. Last summer we operated under a limit of 160 degrees F. maximum. Even this fairly liberal temperature limit was difficult to hold during periods of high production, and this limit couldn't be reduced without drastically interfering with the available amount of cement. Actually, the heat of the cement would not have had very much effect on the temperature of the concrete due to the low specific heat of the cement and relatively small quantity used in the mix. A decrease of 30 degrees in the temperature of the cement would, by calculation, only drop the temperature of the resulting concrete 3 degrees. The gravel coarse aggre-

(*Turn to page* 31)





● This 65-ton high-pressure-steam curing cylinder was transported from the manufacturer's plant at Tulsa, Oklahoma, to Albuquerque on three flatcars.

Crego Block Company's extensive revamping job includes installation of 10-foot diameter autoclave

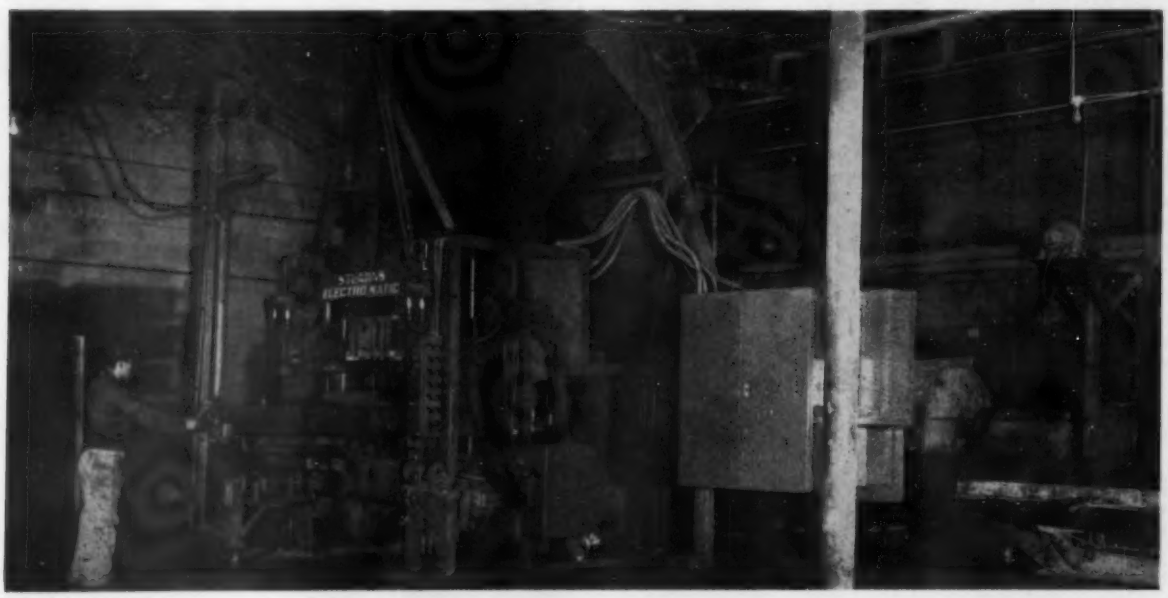
New Mexico's Kingsize Autoclave

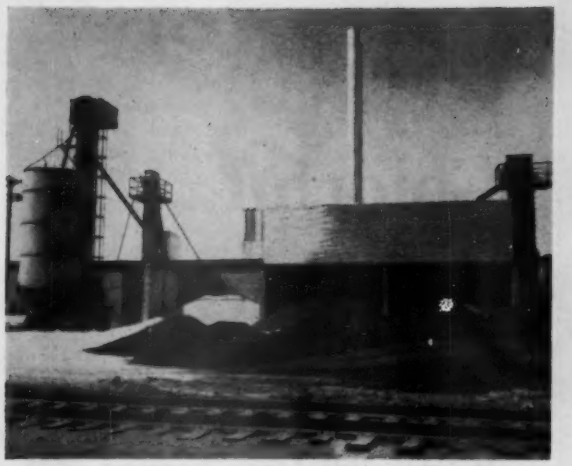
As the result of a substantial revamping job completed in recent weeks, the Crego Block Company of Albuquerque, New Mexico, is operating one of the most modern and efficient plants in the southwestern section of the United States. The new facilities include an excellent setup for crushing, handling, storing and grading aggregates.

The oustanding feature of the revamped plant is the new 10-foot-diameter by 120-foot-long autoclave, believed to be one of the largest units of its kind in the block industry, as well as the first such installation in the state of New Mexico. The 65-ton cylinder is equipped with a quick-opening door, and it accommodates 9,000 block per loading. Steam is supplied by two 125-horsepower gas-fired boilers.

A two-stage system of curing has been adopted in order to make it possible to autoclave the entire output of the plant with a single cylinder. The block are first cured overnight in conventional steam rooms, and then they are formed into 75-unit cubes and loaded onto rail cars. The cylinder holds 15 cars, each of which can carry 8 cubes of 600 block.

Against the possibility of a shift to single-stage curing at some time in the future, the diameter of the autoclave was made sufficient to hold two standard curing racks side by side (inserted endwise). The cylinder will also accommodate a 3-compartment rack placed crosswise. In the latter case space for two pallets could be provided at the top of the middle section, so that each rack could hold a total of 114 units.





● This rear view of the Crego Block Company's plant shows the storage and handling system for cement and aggregates.

One of the noteworthy features of the material handling system is the use of volume proportioners for blending aggregates just ahead of the batcher. The aggregate consists mainly of reddish volcanic scoria which is trucked to the Albuquerque plant from the company's own deposit located about 20 miles southwest of Santa Fe. This material assays approximately 58 per cent silica, 20 per cent alumina and 12 per cent iron oxide.

Other major work done in revamping the Crego plant included installing a new high-production block machine, a new skiphoist, and a new 50-cubic-foot gearhead mixer. Output runs about 7,200 standard units in 7 hours.

The Ice Man

(*From page* 29)

gate temperatures could be reduced by keeping them sprinkled and by evaporative cooling. The gravel aggregate was a blend of two sizes — 2-inch to 1-inch, and 1-inch to No. 4. The 2-inch material had a greater tendency to dry out due to the higher void content. It was this material that could be most benefitted by wetting. The sand generally had a moisture content somewhere between 2 and 4 per cent, and it was not practical to lower the temperature by additional wetting. This pretty well limited additional cooling of the concrete to lowering the temperature of the added water.

Since it was not practical on such short notice to install refrigeration coils in the water tanks, it was decided to use ice for a portion of the added water. The amount of ice first used was 100 pounds per cubic yard. This represented quite a problem in getting sufficient ice to the batching floor and getting it into the mixer in as short a time as possible. Arrangements were made with a local ice company to have a refrigerated truck on hand to store the ice. Crushed ice was received in 50-pound heavy paper sacks. Two men were detailed to unload the ice as needed and hoist it up to the batcher floor. It was found that three additional men were needed to unload the bags from the hoist, open them and dump the ice into the mixer through a chute normally used to introduce dry admixtures directly into the mixer. The size of the concrete batch was 6 to 6½ cubic yards. The handling of 600 to 650 pounds of ice per batch cut the production of concrete at peak periods approximately 20 per cent. Care had to be used in charging the ice down the narrow opening into the mixer so that it would not jam up. This was more critical as the ice started to melt and had a tendency to stick to the sides of the chute.

An air-entraining agent was used as an admixture to produce the air entrained concrete called for in the specifications. An admixture was also needed to improve the workability of the concrete, retard the rate of setting, and to help reduce the heat generated by the hydration of the cement. The material selected for this purpose was used at the rate of 1 pound per sack of cement for the first 18 inches of depth of the foundation; 3/4 of a pound per sack for the next 3 feet of depth; and 1/2 pound per sack for the balance of the pour.

The problem of judging the slump of the concrete as it left the mixer was complicated by reason of the failure of all the ice to melt before it was discharged from the mixer. The slump was taken as the concrete went into the truck and in many instances there was no recession in slump on the job due to the haul. In some cases an increase in slump was found due to the complete melting of the ice in transit. The normal recession in slump for this length of haul in the summer months would be at least one inch. This made the problem of slump control rather difficult. The alternative would have been to hold the concrete in the mixer until we could be sure all the ice had melted, and (even more important as far as slump control was concerned) until all the melted ice was completely incorporated in the concrete.

It was found that with 100 pounds of ice per cubic yard the temperature of the concrete reaching the job in the morning was less than required, consequently during the early hours of the day the amount of ice added per yard was limited to 50 pounds. As the day grew warmer, the amount of ice was increased to 75 pounds per cubic yard.

Temperature of 8 loads of concrete at the plant was found to average 72.3 degrees F. These loads on the job averaged 78 degrees. An important factor in these averages, however, was the fact that during the hottest part of the day, by using ice, we were able to keep the concrete at the plant nearly 20 degrees cooler than the ambient temperature. An interesting sidelight was that while the concrete was being discharged on the job you could place your hand on the under side of the chute or on the barrel and feel how cool it was.

While we were serving this job, temperature checks were made on other projects on which no ice was used, but which involved the same sources of aggregates and cement. These checks indicated that the concrete produced without ice was about 5 degrees cooler than the ambient temperature. The rate of pour varied from a maximum of 115 cubic yards per hour to 34 cubic yards per hour when the job was topping out. The total amount of ice used amounted to 36.5 tons.

In summary, it can be said that ice can be effectively used to cool concrete. If a considerable amount of material must be cooled, it would be advisable to consider the installation of refrigeration coils, so that all concrete produced in hot weather might be cooled with the same convenience and economy that applies to the heating of concrete during cold weather.

The Colorful Approach

Holiday Hill Stone borrows from nature's color pallet to win broad acceptance for split masonry units

● Entrance to this home in Houston, Texas, has warmth and color due to the use of 1⅝-inch Ribbonstone.

Probably one of the best jobs of merchandising split-concrete masonry units is being done today in connection with a product called Holiday Hill Stone. Intensive and imaginative promotion, coupled with an uninhibited use of color, have given this still relatively new material an all but irresistible appeal to architects, builders and the general public in those areas where the product has been made available.

The tremendous success of Holiday Hill Stone seems about equally a result of merchandising skill and production know-how. The product from a qualitative point of view clearly represents the best that can be manufactured with present-day equipment. Tests conducted at Rice Institute of Houston and Southwest Research Institute, of San Antonio and New York, indicate that Holiday Hill Stone exceeds by 50 to 100 per cent ASTM requirements for the highest grade building brick, grade SW (severe weather). Just by itself, and without any build up at all, it has great sales appeal and a tremendous potential for winning acceptance. But the developers were not satisfied just to bank on the appeal of a good product. They paired it up with an excellent flair for modern merchandising that has resulted in something closely resembling a stampede among builders and architects.

Color and texture are the keynotes of the appeal of the product itself, as well as of a large share of the sales promotion that has accompanied the development. Where the block industry as a whole has regarded integral color as an unmitigated nuisance, and has either shrugged it off entirely or at best only consented to

● The exterior walls of this attractive home in San Antonio are of Roughewn Ledgestone in Redwood and Cinnamon shades.

● Units in this striking garden wall are 2⅜- by 3⅝- by 23⅝-inch Sawn-Textured stone in Bermudan color.

dabble with it, the developers of Holiday Hill Stone have adopted it with whole-hearted enthusiasm. As a result of a good deal of painstaking experimental work, ten standard pastel shades have been perfected and marketed. The merchandising flair shows up in some of the Holiday names that have been adopted, such as Parisian Rose, Bermudan, Sea Island White, Riviera Pink, California Redwood, and Brazilian Cinnamon.

Aggregate selection and grading were found to be of critical importance in connection with the production of colored units, and intensive work on this aspect of the problem closely paralleled the careful study of various mineral oxide pigments. Many combinations of aggregate and pigment were studied in all types of structures, and under widely differing conditions of both production and exposure in service, before the company was satisfied it had a product that could be merchandised on an all-out basis.

Holiday Hill Stone is produced in solid units on conventional high-production block machines. The basic units consist of 16-inch and 24-inch long solids made in thicknesses ranging from 1 inch to 5¼ inches. Smooth faced units, having only the variations of texture provided by the block machine and the gradation of the mix, are marketed under the trade name Sawn-Textured Holiday Hill Stone. Rough textured block, produced by splitting the solid units, are marketed as Roughhewn Holiday Hill Stone.

The dominant dimensions of these products are well suited to the ground hugging, essentially horizontal lines so widely sought by contemporary designers. Quarter, random and Roman bonds are readily achieved, and such varied patterns as basket-weave, vertical, swirl and herringbone present no problem at all.

In formulating color mixes for Holiday Hill products the developers concentrated mainly on trying to re-create the grays and browns of soils and rocks, the muted greens of foliage, and the pinks and crimsons of dawn and sunset. As noted in one of the handsome, multi-color brochures describing the units, nature is infinitely wise about color.

Marketing of Holiday Hill concrete products has to date been most extensive in the states of Texas, Louisiana, and Oklahoma. Acceptance of the material in this area appears to be about equally good for both commercial and residential construction. Now other producers from coast to coast, operating under exclusive franchises, are supplying the demand for this quality product. Previous to 1948 less than 10 per cent of the homes built in the San Antonio, Texas, area were of masonry; since the advent of Holiday Hill Stone more than 95 per cent of the homes from $15,000 up are at least 75 percent masonry and more than 65 per cent are of Holiday Hill Stone.

The originators of Holiday Hill Stone are the firm of Burney & Felder, Inc., San Antonio, Texas. They are currently granting manufacturing licenses to qualified firms throughout North America, and they expect to be licensing in foreign countries in the near future. Licensees are provided with a well-planned national advertising program directed at architects, builders and home owners.

● BELOW: This $175,000 home in San Antonio features random length units in thicknesses of 2⅜ and 3⅝ inches. RIGHT: Splitting concrete units on a hydraulic-powered machine especially designed for this purpose.

What Makes A Safe Block Plant?

Every block plant operator who chalked up a lost-time accident last year should read this expert testimony

The 1955 Safety Contest of the National Concrete Masonry Association turned up 39 concrete products plants which operated throughout the year without a single lost-time accident. Fourteen were completing their second consecutive accidentless year. This sounds like a commendable record for the industry until the figures are explored a little more deeply. The composite accident-frequency rate of the companies that took part in the contest was substantially higher than the *average* for all the industries reported by the National Safety Council. When you consider that the National Safety Council's figures include such fairly hazardous activities as quarrying and construction, it becomes evident at once that the block industry has a serious problem on its hands.

Safety is not just a humanitarian business; it's selfish, too. On-the-job accidents don't just cost lives and injuries — they cost an appalling amount of money to the manufacturer who tolerates them. Plant safety is probably the easiest thing in the world to justify — and the hardest to sell. Like Christmas and motherhood, everybody believes in safety; but quite frequently people don't do anything about it.

On the safe ground that the plants with unblemished accident records ARE doing something about safety, CONCRETE magazine surveyed the award-winning producers to find out how accident-free plants get that way, and to provide a yardstick to guide producers who would prefer not to watch their money go down the drain in needless accidents.

George Katterjohn of Paducah, Kentucky said: "Our industry as a whole should be ashamed and alarmed at our accident rating, and a continuing program should be carried on so that we will take a more favored place than we now have."

In the interests of giving impetus to such a program and helping to provide an awareness of the importance of plant safety, CONCRETE offers the results of its plants safety survey.

A number of safe-operating practices were almost universally listed by the respondents — in one form or another — as part and parcel of an effective safety program. These unanimous contributing factors to safety included:

Low Labor Turnover

On almost every survey answer, this was given top billing. Here are two typical comments on this important factor of plant safety:

J. W. Howie, Standard Block Company, Gulfport, Mississippi: "Our help has been with us for years, and each man is trained to his job. We have practically no labor turnover. *This is a prime safety factor.*"

R. M. Bonus, Hay-Con Tile Company, Detroit: "Probably the main factor affecting accidents in our plant is the low labor turnover. A man who knows his job, and has been impressed with safety before he starts, is less prone to accidents. Our men have been with us for years."

This certainly casts a brighter light on the importance of good employee-relations in the economical operation of a products plant. Heavy labor turnover is not only expensive in jacking up operating costs, but in injuries to workers as well.

Good Housekeeping

This, of course, is a tried and true standby of every safety brochure, lecture and program, but the products plant safety winners unanimously agree that it is also a vitally important part of an effective safety program.

Again to quote George Katterjohn: "We have always insisted on clean housekeeping in our plants and in our yards. There is a designated place for everything and we insist that block piles be neatly cubed and stacked and machinery and replacement parts kept off the floor and in bins. We have lots of concrete pavement about the plant which is swept

● Henry Quaritius, who presided at the National Concrete Masonry Association's 2nd annual safety award session earlier this year and the top award winners in the three classes of competition Hamilton Lott, Palmetto Quarries Company; R. E. Sheer, Geist Builders Supply Company; and W. A. Carter, Sr., Fischer Lime & Cement Company.

clean at the end of every day. We do not permit unused or abandoned equipment or other junk, together with broken block, to accumulate in piles."

R. E. Scheer of the Geist Builders Supply Company in Cleveland, points out: "Good housekeeping, in addition to being very important from a production standpoint, is of major importance in a safety campaign."

At N.C. Products in Raleigh, North Carolina, "all spillage at the off-bearer is removed immediately and the cubing area is kept clean to insure good footing," according to J. J. Andrews.

And A. W. Schultz of the Zeidler Concrete Products Machinery Company at Clear Lake, Iowa, adds: "Plant cleanliness not only gives the men pride in their job and their work, but removes hazards from the floor and makes the plant much safer."

Periodic Inspections

A trained objective eye, looking specifically for safety hazards and dangerous operating practices, can often turn up things that on-the-job workers or even management will fail to see because they're too close to them. Almost all of the award-winning plants provide for frequent, periodic inspections to seek out danger spots — either by a safety committee of employees or an insurance inspector.

Typical comments on inspection include:

Hamilton Lott, Palmetto Quarries, Myrtle Beach, South Carolina: "Trained men make monthly inspections of our plant. After each inspection, a safety meeting is held and the inspector goes over that day's report and discusses with the individuals responsible the potential hazards found and ways to correct them."

James H. Grove, M. J. Grove Lime Company, Lime Kiln, Maryland: "Our safety committee tours our property every two weeks and makes a report at the safety committee meetings, in which suggestions are made to aid in the prevention of accidents and to make better working conditions."

And Mr. Bonus, of Hay-Con again: "Both the State of Michigan and our insurance company make periodic inspections of our plant. Any recommendations received from these agencies are immediately applied."

Proper Protection for Equipment

Another standard safety measure, long preached, is the provision of proper protective devices for dangerous equipment. Yet accidents continue to happen because machinery isn't properly safeguarded — but not in the plants of the award winners, who are unanimously conscious of this important safety measure.

Safe machinery goes back to the purchase stage, according to A. W. Schultz of the Zeidler Company. Says Mr. Schultz: "In selecting a piece of machinery, it is well to be sure it is not loaded with gadgetry that tempts the men to make adjustments while the machine is running. It should also have properly designed controls that don't place the men in awkward or strained positions while operating the machinery."

To which Roy E. Maples, Maples Concrete Block Company, Cohutta, Georgia, adds: "We find that most accidents that have occurred in our plant in the past ten years have been in or near machinery."

And J. W. Howie of the Standard Block Company concludes: "All our moving machinery parts are fully enclosed, thereby eliminating any danger of the human body coming in contact with exposed gears or belts."

Proper Protection of Workers

No matter how carefully the machines are guarded, there is still the continual movement of heavy materials around a products plant and there are errors of human omission or commission. An extra safeguard is the wearing of safety clothing. Almost all of the award-winning plants recommended this practice.

Said J. J. Andrews of N.C. Products: "Our company buys safety-toed shoes in large lots and we offer them to workers on a payroll deduction plan at cost. Hand pads and gloves are furnished by the company to all personnel."

And Hamilton Lott of Palmetto Quarries, reports: "We furnish safety equipment, including helmets, goggles, gloves and respirators at no cost to the employee. It is our practice to buy safety shoes and sell them to our men at a loss to encourage their use."

Maintenance and Repair

Preventive maintenance is an old story, too, but it's still a mighty potent one. It not only saves on equipment, but on injuries to your workers, too. A properly functioning, well-maintained piece of equipment is much less likely to injure someone than its mal-functioning opposite. It's also important that repairs and maintenance be handled by men who know what they're doing — who are equipped with the proper tools and know-how to do the job. Listen to what some of the award winners have to say on this point:

"We don't make temporary adjustments in defective equipment. Our plant maintenance man knows that makeshift repairs can cause accidents, and he repairs defective machinery completely and promptly." (A.W. Schultz, Zeidler Company.)

"We keep our machines and other equipment in good working condition through a preventive maintenance program, thereby eliminating stoppages in production and accidents due to wear of equipment." (J.J. Andrews, N.C. Products.)

Safe Driving Program

One of the most prolific sources of accidents in and around a products plant is careless driving—both of delivery trucks and plant vehicles. Both types of drivers come in for a great deal of attention among the safety-minded plants.

J.W. Howie of the Standard Block Company emphasized the importance of safe-driving in their safety program as follows: "In all of the years that we have been doing business, we have never had a traffic ticket. The public likes our drivers. Why? Because they are trained to be liked. They make good salesmen in building up goodwill for us—and don't think we don't hear about it from our customers."

As for careless drivers, Mr. Howie says: "We've had our experience with the speed boys and show-offs, and thank goodness it's over. This is one of the true hazards of any block plant. Our drivers know what is expected of them—safety above everything else. If we are late on deliveries, then we're late. But we don't sacrifice safety."

It's perhaps unnecessary to add that Mr. Howie's company is doing quite well in Gulfport operating under such a philosophy.

Safety-Minded Management

This is absolutely basic to any successful safety program. The management that isn't, itself, completely sold on the importance and necessity of a safety program, will have a hard time selling its employees.

As Hamilton Lott of the Palmetto Quarries points out: "Our supervisory people are to a great degree responsible for our low accident rate. They are all safety-minded and know that safety pays tremendous dividends."

An alert management can find dozens of ways to constantly impress

the subject of safety on its employees. A few methods reported by the NCMA winners include: rotating service on safety committees; regular safety meetings; posters and placards on safe practices in and around the plant; safe-operating bonuses for participating workers—and penalties for unsafe practices; company-wide dinners or outings to celebrate safety awards or a period of safe operation.

The only limit to such devices is the ingenuity of the management planning them—and management can be decidedly ingenious when they know the result is going to be a considerable saving in injuries as well as operating costs.

And the stakes are high to the employee, too. Says George Adams, of the Adams Concrete Products Company, Ypsilanti, Michigan: "We try to impress each man that he is important to the whole operation and that an injury which would cause his absence from the job handicaps the whole group as well as diminishing his income."

Those are the BIG points, on which there was almost universal agreement among the blue-ribbon safety performers. Now, let's list some safety measures with considerable merit which were reported individually as contributing to the safety record of a particular plant. Included in these "Tips for Safety" are:

Keeping the same man consistently on a designated job holds down unnecessary accidents. (Maples Concrete Block Company, Cohutta, Georgia.)

Whenever any work is being done on mixers, block machines or conveyors, the man doing the work pulls the fuse out of the disconnect and carries it in his pocket until the repair job is completed. (Hay-Con Tile Company, Detroit.)

All moving machinery parts are painted in bright colors as a forewarning. (Maramonte and Son, Milwaukee.)

Each member of a three-man plant safety committee serves for three months, with one man being replaced each month. Thus, in time, each employee will serve on the safety committee. (Geist Company, Cleveland.)

If the plant operates accident-free for three consecutive months, each employee receives $2.00. Truck drivers receive $3.00 for a three-month accident free period; but if a driver has two chargeable accidents in the same period, he is warned that another one will cause his dismissal. (Ideal Cement Stone Company, Omaha.)

Arrangement of the kilns in respect to the machine for flow of finished products to the kiln and from the kiln to the yard is such that no crossed traffic—a definite safety hazard—is involved. (N.C. Products, Raleigh, North Carolina.)

Each accident is evaluated in the presence of all men in the plant, and the cause and preventive steps are aired thoroughly. During the discussion, carelessness is never condoned. (Zeidler Company, Clear Lake, Iowa.)

At the John Haeusser Concrete Products Company in Buffalo. New York, these six simple safety rules are rigidly enforced:

1. **Shut off power before working on machinery;**
2. **Be sure guards are in place before starting machinery;**
3. **Don't operate any machine that is in any way defective;**
4. **Leave no obstructions in any work area;**
5. **When stacking, see that pile is secure from tipping;**
6. **Don't tackle, alone, any job beyond your ability.**

And finally, Earl Christensen of Christensen Concrete Products in Grand Island, Nebraska, rather cryptically points out that their safety record is due, in part, to the "hiring of younger married men."

Anyone who needs convincing of the economic advantages of an effective safety program is referred to the article, "Safety Pays" on page 30 of the April issue of CONCRETE. As reported there, the Ideal Cement Stone Company of Omaha was able to bring its insurance premiums down many thousands of dollars over a ten-year period by implementing an intelligent and effective plant safety program. Says Earl Peterson of Ideal, "No phase of management activity takes so little time as safety, yet returns so much financially and in the saving of human lives."

And for those who doubt that these prize-winning companies really work at safety, consider the Capitol Concrete Products Company of Topeka, whose management visited almost every other products plant within a 200-mile radius in an effort to better safety standards in their own plant.

CONCRETE offers its sincere thanks to all these award-winning companies who so generously answered our request for safety information that we might pass along to other members of the industry. A fitting benediction to the safety story was provided by R.E. Scheer of the Geist Company, who wrote:

"Safety is happiness—no doctor bills, no hospital bills, no florist bills, no loss of individual income, and no training of men to replace those injured. Since happiness is the goal for all, our management and employees have concentrated on safety to the last man, and are working diligently to maintain our perfect score."

■

Block Home Wins Popularity Vote

An all-concrete masonry house has received the "most popular" vote from readers of *Living For Young Homemakers.*

Four of the nation's leading shelter magazines told the National Real Estate and Building Journal which of their featured homes excited the most response from readers during the past year.

Living's concrete masonry home was designed by G. Hugh Tsuruoka, A.I.A., architecture and design editor. All interior and exterior walls are concrete block. Inside, the block was left natural, painted or surfaced with painted plywood attached with furring strips.

■

Use Of Two-Way Radio Pays Off

Besides improving customer service, a new 2-way radio control system at the Fort Worth Sand and Gravel Company, Fort Worth, Texas, is saving about 20 per cent in mileage per yard of delivered concrete. According to traffic manager, Weldon White, the radios save about $10 a day per truck.

■

Texas Ready Mix Assn. Holds Second Convention

Members of the Texas Ready Mixed Concrete Association held their second annual convention at Dallas recently. Officers of the group are Thomas L. Amis, president, Alvin N. Kelso, first vice president, J. T. Suggs, second vice president, and G. O. Rogers, secretary-treasurer. Ray L. Cain is executive secretary.

Check That Insurance!

You may be worth more than you realize

By HAROLD J. ASHE

Much more frequently than large businesses, small business enterprises seem prone to sustain casualty losses from which they may never quite recover. Either one of two common oversights is likely to bring this about: There may be too little insurance to cover the full amount of the loss; or there may be no insurance at all covering the particular disaster.

It is slim comfort to have a $50,000 fire insurance policy on a plant and equipment when, after the fire, it develops that the actual loss totals $65,000 or $75,000. And it is no comfort whatsoever to have adequate fire insurance, only to be wiped out by an earthquake, cyclone or other disaster on which there is no insurance at all.

It is wasteful to carry more insurance than the maximum loss which can be sustained. However, most manufacturers seem to err in the other direction. A fire insurance policy, for example, may be ample to cover a fire loss immediately after the policy is written. However, if it is written for a three- or five-year period, as are many policies because of premium reduction features, less and less protection may be afforded with the passage of time.

This diminishing insurance protection may come about because of any one or more of several circumstances which are inherent in the operation of most businesses. Rising price tags on certain replacements, such as production machinery and equipment, may exceed by a wide margin either the initial cost or the estimated value at the time of writing a policy. Considering present day building costs, plant buildings constructed only a few years ago may cost considerably more to replace than contemplated by the amount of insurance carried. Some items completely depreciated for tax purposes may, nevertheless, have some remaining use value and need to be replaced in event of destruction by fire or other disaster.

During the period a fire insurance policy has to run, even a relatively small business may greatly increase the physical assets subject to fire loss or other casualty. Increases may range from acquisition of additional machinery and equipment and office fixtures and machines to major alterations and improvements to plant buildings.

If your firm's volume of business is increasing over the years a policy has to run, the inventory of materials and finished products may rise substantially. Again the insurance may be insufficient to protect you against a substantial loss. At this point, you are undertaking to self-insure the increased inventory without, however, being able to spread the risk. For a small premium saving you are gambling a substantial part of your assets.

In this connection, it is unwise to think in terms of average inventory values through the year. Neither opening nor closing inventories may represent maximum inventories on hand at certain periods of the year. In fact, if your company operates on a calendar year basis, year-end inventories may be at the lowest level of the year. Peak inventory may exceed average inventory by as much as 40 or 50 per cent or more. Right at this peak inventory period disaster may strike.

At least once a year, you should take time to review the nature and extent of your insurable assets — as well as the risks to which they are exposed — to make certain you are adequately protected. This should be done on the basis of replacement costs. You may discover you are worth more than you realize — and that you are insured for far less than a possible loss which you could sustain.

It may be wise to make this review in consultation with an insurance broker. He can analyze the various policies and explain in lay language precisely what hazards are insured against and the effect of exclusion clauses. The extended coverage on a fire insurance policy may be far less inclusive than you assume.

For example, a typical policy with extended coverage on windstorm excludes losses from frost or cold weather or ice (other than hail), snowstorm, sleet, waves, tidal wave, high water or overflow, whether driven by wind or not. A further clause points out that an insured loss occurs from water, rain, snow, sand or dust only if the property covered first sustains an actual damage to roof or walls by the direct force of wind or hail, with the water, rain, snow, sand

(*Turn to page* 41)

Sales CLINIC

Business Is Booming

If you think things are going to get less hectic in the building materials business, or tail off in years to come, consider this: while you read the following item 5,000 families will move into new homes in the United States. The authority for this statement is the Chicago advertising agency of Konon, Englen and Noone which has made an exhaustive study of the building products industry. The agency has prepared a four-color sales control map (it costs $15) which outlines the markets where 69 to 98 per cent of building products will be sold in the next five years. Divided into six regions, the map is keyed according to climatological factors affecting use of structural materials. States are identified by color as to degree of population growth or decrease as it will affect building products sales. The 236 individual market areas are size-classified by symbols.

Here are some of the points brought out in the study which should be of basic interest to everyone in the ready-mix or concrete products industries:

—A new city, the size of Chicago, is built from scratch every year in new homes in this nation;

—These homes house 1,300,000 families yearly, with an average income of well over $4,000;

—It costs more than $50 billion to build this new city, but we've been building one every year since 1949 and we'll continue the pace for the next five years — at which time the tempo will *increase* as war babies grow up and get married;

—Ten years ago there was hardly such a thing as a building specialties industry. Today, special construction items, sold by *new* producers through *new* outlets is a multibillion dollar business;

—The professional builder is the key to this boom in construction. As a manufacturer, he buys more than the automobile, petroleum, textile or railroad industries; and as a retailer, he sells more than the entire food industry;

—The states where building is booming the largest are California, Florida, New Jersey, Connecticut and Massachusetts, followed closely by Pennsylvania and New York, and a block of midwestern states including Illinois, Indiana, Ohio and Michigan;

—The top ten metropolitan markets for building products are: Los Angeles, San Francisco, Chicago, Houston, Detroit, New York City, Philadelphia, Baltimore, Washington and Miami.

So things are looking rosy for the building materials business for a long time to come. One warning, though: this rosy picture is going to attract others, too. So don't drag your feet — and don't forget to read Sales Clinic every month.

Thimk

A Cleveland manufacturer has come up with an idea that is selling his product through goodwill — and pretty inexpensive goodwill at that. His campaign is based on the theory — somewhat applicable in the building materials field as well — that when legitimate competitors in any line of business offer much the same service, price and quality, orders go to the company and salesmen on friendliest terms with the prospect and customer.

This company wins friends for itself and its sales staff with an endless array of 4-by-6-inch motto cards which it distributes enthusiastically to its customers. The mottoes are not constructive; rather they are cynical, sarcastic or mildly insulting and reverse the usual inspirational type mottoes. For example: "Use your head — it's the little things that count"; "You have a perfect right to your own opinion — provided it agrees with mine"; "Somebody said it couldn't be done — so the hell with it"; and similar gems of wisdom.

These mottoes are printed under the guidance of a purely fictitious organization called "Let's Have Better Mottoes Association" — and all of them include prominently, but not overpoweringly, the imprint of the manufacturer who puts them out. During conventions or trades shows, in business letters, in direct mail promotion, in customer calls — the mottoes are included and are doing a remarkable job at a phenomenally low cost in keeping the name of the company before its prospective customers. The result is a friendlier basis all around — and more business. It's a device that you could use easily and inexpensively in your business, too.

Letters You Don't Have to Write

There are certain circumstances under which a local businessman can do himself a great deal of good in building friendly relations with his customers and prospective customers simply by writing a letter. Most business letters are written from the point of view of the selfish interest of the businessman — writer. An insurance man in Kansas City has found that he gets remarkable results by reversing this process and writing strictly to the interests of the recipient of the letter. His advice is decidedly appropriate to any local merchant — including, we think, the producers of ready-mixed concrete and concrete products.

Maxwell Ross, director of advertising for the Old American Insurance Company, suggests 12 letters that aren't expected of you — and therefore can build very effective goodwill for your company and your product:

1. When a customer or client has been promoted or changed jobs.
2. When a daughter or son gets married — or a new baby arrives in the family.
3. When people buy a house.
4. When a customer has a birthday.
5. When people move into town.
6. When you see a customer's name in the newspapers.
7. When a customer is elected or appointed to some important club or civic office.
8. When a person finishes a term of office.
9. When someone does a favor for you.
10. When some product or service pleases you.
11. When a serviceman comes home.
12. When you want to thank people for their patronage.

Cut cost, improve performance of two-way radio by switching to . . .

LOW FREQUENCY TRANSMISSION

By
PHIL HIRSCH

Within recent years a substantial number of the nation's ready-mix plant operators have installed two-way radio communication systems. In some cases, however, poor reception has been a more-or-less chronic complaint. One firm faced with this problem — Aurora Redi-Mix Concrete Company, Aurora, Illinois — solved it in a way that many others may be able to follow; the company switched to a new frequency. The change not only improved reception, but cut costs as well.

Aurora Redi-Mix acquired citizen's band (460-470 megacycles) equipment about two years ago. Communications were only indifferently efficient. Usually, whenever a truck parked behind a building at a distance of 10 or more miles from the base station, messages had a hard time getting through. Sometimes, even if there was no more than a grove of trees in the way, it would be hard to send or receive. Since the drivers were stuck behind such obstacles much of the time, the problem was a sizeable one.

Cost of the two-way radio installation, which had been rented rather than purchased outright, came to $184 a month. This covered the base station, transmitter, and antenna, plus receivers installed in 10 trucks and a troubleshooter's station wagon.

In July, 1955, Aurora Redi-Mix replaced its existing equipment with a low-band (30-50 mc.) transmitter and receivers. A change in FCC regulations a short time earlier made the switch possible. Briefly, FCC ruled that citizen's band licensees located near a metropolitan area could, under special conditions, operate on the lower frequencies. Poor reception was one of the special conditions. Up until this ruling, low-band licenses

● LEFT: Plant operations manager Lyle Feltes, of Aurora Redi-Mix Concrete Company, seated in front of the low-band transceiver installed last summer. BELOW: Truck installation for low-band reception is similar to that used for citizen's band.

could not be granted to most applicants in or near large cities.

"Once the change was made, reception improved about 1,000 per cent," reports Joseph Feltes, president of the Aurora firm.

The trouble, basically, was that the previous high-frequency signal, because of its short wavelength, was often deflected by buildings, trees, and other obstacles in the transmission path, creating a zone of silence on the other side. If a receiver happened to be located in this zone, the message would either fail to come through, or it would be considerably weakened. With the lower frequency and longer wavelength, however, messages had less trouble passing through the obstacle and reaching the receiver. The antennas required by the new band — which are 4 feet long — also help, since they absorb a greater portion of the signal than the 6-inch antennas formerly employed.

Aurora Redi-Mix was particularly happy with the change when it learned that the rental price of the new systems would be only $117 a month, nearly $70 less than the former bill. Also, as it turned out, servicing costs were approximately 25 per cent less.

Installing the low-frequency transmitter, a new antenna, and receiving equipment cost $300 (in addition to the monthly rental charge). The license was secured by filling out an FCC form and sending it in to Washington. Processing of the application took about four months.

With the new equipment in operation, Aurora Redi-Mix has been reaping a number of benefits from its two-way communciations system that weren't available previously. As Mr. Feltes puts it: "When the high-frequency equipment was installed, we thought it would produce all sorts of time and cost savings. It wasn't until we switched to the low band, though, that most of these promises began to materialize."

The radio has been a big help in cutting down central mixer plant labor costs. Every day, about half an hour before quitting time, the drivers call in to report whether they need additional concrete. Sometimes they don't and the mixer crew can be sent home before overtime charges begin mounting. At other times, part of the crew can be dismissed because the foreman knows there won't be enough work to keep all his men busy. Aurora officials estimate that the radio slices, on the average, about five man-hours a day off the plant labor bill.

One of the occupational hazards of the concrete business is that often the customer overestimates, or underestimates, his needs. Without a radio, a second truck has to be sent out from the central plant to take care of each shortage, or the first one has to make another run. Often you're pretty sure that somewhere in the field you've got excess concrete. If you knew where it was you might not have to schedule that extra trip from the plant.

"With radio, this uncertainty can be resolved in a few minutes," explains Mr. Feltes. "And often the truck with concrete to lend is only a few minutes away from the spot where additional mix is needed. So we not only give the customer faster service than would otherwise be possible, but we save on our truck operating costs."

Aurora Redi-Mix officials estimate that, on the average, 10 to 12 customers require extra mix in a typical week. Usually the job site is 7 to 8 miles from the mixer plant. The company figures that each of its trucks eats up approximately $8 every hour

it's on the road; thus, by reducing these extra trips from the plant, radio is clearly producing a substantial benefit.

During the peak of the construction season, when the mixer plant is operating at capacity, Aurora Redi-Mix drivers radio the base station when they're a few miles away and headed in for another load. The dispatcher contacts the plant via intercom, and the crew has the batch ready when the truck pulls in. This system not only cuts loading time, but substantially reduces the chance that trucks will pile up at the plant, waiting their turn to be charged. As a result of this benefit, company officials figure that radio enables the plant to turn out between six and nine extra loads during a peak day's operations.

Radio also plays an important role in ironing out the day-to-day headaches that crop up at the job site. A form may break at a given job, or the customer may find that his formwork can't be completed in time for him to accept delivery of his order on schedule. Maybe the ground at the site is too soft, requiring special precautions to prevent damage to the mixer truck. These are just a few of the things than can happen to increase the time and/or cost of delivery. By having the trucks and the troubleshooter's sedan radio-equipped, Aurora Redi-Mix saves a lot of unnecessary truck-miles.

"Without radio," explains Mr. Feltes, "we'd have to rely on the telephone for such information. "But phones have a habit of being a good long distance away when you need them in this business. By the time we'd get the message, it would probably be too late."

Radio produces a similar benefit when trucks suffer mechanical breakdown. Before radio was installed, a company driver often spent half an hour hunting up a phone if he had, say, a flat tire on the road. Now, he's able to get the company's service truck rolling minutes after the trouble occurs.

The need for getting the truck repaired as quickly as possible is not just a matter of the driver's salary and truck overhead, company officials point out. For, if the rig is held up very long, there's good chance the mix will set up. With chipping costs what they are, this prospect is anything but pleasant.

"Two-way radio is doing an important job for us," Mr. Feltes added. "We're convinced the investment is more than balanced by the insurance and cost savings it provides."

Insurance

(*From page 37*)

or dust entering through the openings made by the wind or hail.

One firm recently sustained a heavy loss from a windstorm and resulting water damage. Fortunately it was insured. However, this loss alerted management to another peril, until then unsuspected. Overlooking the property is an elevated irrigation ditch. The manager started speculating about the possible water damage should the ditch overflow or break. The result: A policy insuring against flood damage. The rate was determined by personal inspection and calculation of the risk involved.

While you may be insured against the more obvious risks to which your business property is exposed, such as fire, you may be disinclined to give thought to apparently more remote risks. You may give more weight to the additional premium costs than the possible disastrous consequences from an uninsured loss.

No matter how remote the risk appears, the possibility of a loss being sustained should not be dismissed lightly. If, in fact, the risk is slight, the insurance protection accordingly is less costly. Dollar for dollar of insurance premium, protection from other risks is as good an insurance buy as that afforded against fire loss. If the premium seems high there is

Darex Diary

No. 11 of a series

by Henry L. Kennedy
Member, American Concrete Institute
Manager, Construction Products
Dewey & Almy Chemical Company
Cambridge, Mass.

***The fingerprint of a molecule**
***Vibration of air entrained concrete**
***Compressive strength of cores versus cylinders**

As a part of our current $75,000 expansion of laboratory facilities, we recently acquired a fancy piece of apparatus known as an infrared recording spectrophotometer. This highly complicated gadget plots the actual profile of an unknown organic substance, making possible an accurate analysis. This is the way it works. An infrared beam is passed through an organic sample. This causes the sample's molecules to vibrate and absorb energy at certain definite frequencies, which are recorded for interpretation. This record, or infrared spectrogram, is so completely unique that it has been called "the fingerprint of a molecule." Incidentally, the operation and interpretation of data from this apparatus is so complex that a trained specialist, known as a spectroscopist, is required to operate it.

We are now using this infrared spectrophotometer extensively in our research and development program and in quality control. It provides added assurance that our Construction Specialty products will continue in the tradition of uniformity and quality for which they have become known throughout the world.

* * * * *

The advantages brought to concrete by the purposeful entrainment of air are well recognized by most concrete users. And so are the technical and operational advantages of internal vibration in concrete placement. But what is not clearly established is the relationship between these two techniques.

As we all know, many of the desirable effects of air entrainment have been achieved by the time the concrete is placed in the forms, before vibration. These are lower water-cement ratio of the air entrained mix, improved plasticity and workability, reduction in segregation. Naturally, such concrete will respond much more readily to consolidation effort, particularly if this is brought about by modern, high frequency internal vibration. But the thing to watch in this operation is that the concrete is not subjected to over vibration.

Sustained internal vibration—over and above that which is required to consolidate the concrete—can cause segregation of the coarse aggregate. Since uniformity and homogeneity are properties in the concrete that we always strive to obtain in the finished product, over-vibration could be undesirable. A second effect of over-vibration is the reduction in the actual volume of entrained air.

These things we know. But how about bleeding? Is the concrete in place durable? These are the questions modern concrete technology is still striving to answer. Until more is known about these things, we recommend that internal vibration be limited to the extent necessary to thoroughly consolidate the concrete. Evidence at hand suggests that not to do so could be undesirable.

* * * * *

Have you ever wondered why the compressive strength of cores removed from the concrete structure is consistently greater than the compressive strength of job-made compression cylinders? It is also fairly well established that the magnitude of this difference is greater for air entrained concrete than it is for plain concrete.

A logical explanation for this difference is the fact that concrete placed in the forms receives a higher degree of consolidation through internal vibration than does concrete hand tamped in a cylinder mold. Since the improved plastic qualities of the air entrained concrete make it even more responsive to internal vibration, it seems likely that this feature is the explanation for the wider margin in strength noted between cores representing the structure and corresponding job-made cylinders.

Insurance

(*From page* 41)

good reason for it: The risk is greater than the manufacturer assumes.

The fact to keep uppermost in mind in considering any form of insurance protection is the irreparable loss which can be sustained, if not insured. When you undertake to "guesstimate" the risk from a certain casualty, speculating on its probability or improbability you are doing so without the facts. If you sustain a loss from an earthquake, and are uninsured, the probability or improbability of such a loss being sustained is immaterial after the disaster.

Incidentally, on the subject of probabilities, manufacturers outside the Pacific Coast states unwisely tend to dismiss earthquakes as too unlikely to justify insurance coverage. Geologists consider earthquakes a possibility in every part of the country. Few people know that the heaviest shocks ever experienced in this country centered in the southeastern corner of Missouri, changing the whole surface of the countryside. Boston, 1100 miles distant, felt the tremors. Known as the New Madrid earthquakes, these occurred in December, 1811 and January and February, 1812.

Even in California, which has experienced several devastating earthquakes involving heavy property loss, there is a tendency to ignore this risk — except in the immediate areas which have had one or more quakes. When Long Beach-Compton earthquake struck in 1933, few business firms were covered. Uninsured losses ran into the millions of dollars.

Whether or not you are adequately insured against the risks to which your business is exposed is a problem only you can resolve — before the event. But this much is certain: If you are not adequately insured, you are gambling part or all of your business assets. Against a possible heavy loss, your "winnings" can total only a moderate amount represented by the premiums "saved".

■

Camden Lime To Manufacture Flexicore

The Camden Lime Company, Camden, New Jersey, is now manufacturing Flexicore precast concrete building slabs. The company will provide Flexicore concrete slabs for builders and contractors in the Camden-Philadelphia-Trenton area.

Job Site Batching

• H. W. Gentry Company, Walnut Creek, California, batches at job site with the Noble-Mobile batching plant-on-wheels. The plant batches automatically, is driven on highway to job site, goes quickly into production with no field wiring, footings or crane time required on base plant.

Lift Trucks Cut Time

• Before lift trucks were placed in service by John Long Home Builders, Inc., Phoenix, Arizona, it took almost 2 hours to unload concrete block manually from the delivery truck. Now three Yale lift trucks perform the same work in 12 to 15 minutes, and can place the loads in spots around the foundations where they will be within easy reach of the block masons.

Crane Job

• Setting pre-formed concrete flooring into place at a Pewaukee, Wisconsin, farm building is the job undertaken by this Bucyrus-Erie H-5 Hydrocrane. The machine is owned by the West Allis Concrete Products Company, West Allis, Wisconsin.

Motorola Vice Presidents

A major expansion of the national sales structure of Motorola Communications and Electronics, Inc. was announced recently by Daniel E. Noble, vice president. The expansion got underway with the establishment of four geographical sales divisions and the appointment of six vice presidents.


A. L. Reese


E. S. Goebel

Arthur L. Reese, formerly assistant secretary, was appointed vice president and operations manager. Eugene S. Goebel, formerly national sales manager, was made vice president for market relation with duties to include public and customer relations and other special staff assignments.

Four former regional managers in the field were appointed vice presidents and placed in charge of the new sales division. They are: Lowell E. White, vice president and eastern sales division manager; Homer L. Marrs, vice president and central sales division manager; Edward L. Falls, Jr., vice president and southern sales division manager; and Donald F. Brickley, vice president and western sales division manager.

Yale Branch Manager

Harold E. Moon, materials handling salesman and sales executive in the Cincinnati-Dayton-Columbus industrial area for the past eight years, has been appointed manager of the Cincinnati sales and service branch of The Yale Materials Handling Division, The Yale & Towne Manufacturing Company. Mr. Moon replaces J. Russell Manning who has been appointed manager of the Yale branch in Detroit.

Marietta Promotion

Vernon L. Gatewood, plant manager of the Charlotte, North Carolina, branch plant of The Marietta Concrete Corporation, Marietta, Ohio, has been named manager of the company's Jamestown, New York, plant. This plant is Marietta's newest, having been in operation for only about two years, and was established to serve the Eastern states with concrete building products and concrete farm and industrial silos.

Vacation Break

The plants of the Industrial Manufacturing Division of the Nopco Chemical Company and its subsidiary, the Metasap Chemical Company will shut down for two weeks this summer so that employees can take their annual vacation. The plant in Cedartown, Georgia, will be closed from July 1 through July 15 and the Harrison, New Jersey, plant from August 12 through August 26.

Blaw-Knox Promotion


R. S. Connolly

Richard S. Connolly, formerly sales engineer with the heavy steel forms department of Blaw-Knox Company, Pittsburgh, Pennsylvania, has been named assistant sales manager of that department. Mr. Connolly joined the company in 1947.

Koehring Distributor

The Cactus Equipment Company, Houston, Texas, has been appointed products distributor in Southeastern Texas for Koehring Company, Milwaukee, Wisconsin. The company will handle the complete line of Koehring heavy-duty construction equipment along with products of three Koehring subsidiary manufacturers: Parsons Company, C. S. Johnson Company and Kwik-Mix Company.

Yale Sales Manager

The Yale & Towne Manufacturing Company, Materials Handling Division, has appointed Garnett A. Vining to the position of western regional sales manager.

Fairbanks-Morse Officers

At a recent meeting of the board of directors of Fairbanks, Morse & Company, three new officers were named. Robert H. Morse, III, formerly sales manager, was elected vice president-sales; D. L. Harwood, formerly general purchasing agent, was elected vice president-purchases; and J. F. Weiffenbach, formerly chief product engineer, was elected director of engineering.

Mixermobile Promotion


W. Hardy

Mixermobile Manufacturers, Portland, Oregon, recently announced the appointment of Wayne Hardy as district representative for the 14 mid-western states. Mr. Hardy has been with the firm, manufacturers of the Scoopmobile front end loader, for 7 years. He will headquarter out of the Portland, Oregon, office.

Rowell Named President


C. F. Rowell

The board of directors of the Port Huron Chemical Company, Port Huron, Michigan, has named C. F. Rowell president of the concern. Mr. Rowell was formerly vice president and sales manager of the Stearns Manufacturing Company of Adrian, Michigan. The Port Huron firm designs and develops chemicals for the concrete block, pipe and ready-mixed-concrete industries.

Open Challenge Factory

J. Ross Castendyck, president, Challenge Manufacturing Company, Los Angeles, California, manufacturer of Challenge Pacemaker truck mixers, recently announced that the new Challenge plant in Bryan, Ohio, is now in full production.

Ideal Cement Promotion

Ideal Cement Company, Denver, Colorado, has announced the appointment of Harry B. Bolton as general sales manager. Mr. Bolton has been with the company for 21 years, the past five years as southern region sales manager.

Dodson's Digest

Bob Chapman learns about summer concreting

Called Bob Chapman on the phone the other day. Bob is an old school chum of mine who owns a thriving concrete-block business on the other side of town.

"Hi, Bob," I greeted him. "Are you in the mood to do a revered school acquaintance a trifling favor?"

"Dodson, what on earth are you doing in town?" Bob chuckled. "I thought you took a vacation all summer. After all, you can't sell any Calcium Chloride for concreting."

"That's where you're wrong!" I informed him, bristling. "I have to work *harder than ever* in the summer to educate skeptics like you on the value of Calcium Chloride in summer concreting."

"Nonsense!" Bob scoffed. "I use Calcium Chloride in the winter, but—"

"I spend *all summer*," I interrupted, "telling concrete men that they can get increased workability and higher early strength *all year long* with Calcium Chloride. Did you know that even at 70 degrees, concrete develops 145 per cent more strength in 24 hours with Calcium Chloride?"

"No, I didn't," Bob admitted, his interest picking up. "Tell me more!"

"Why, if I took a vacation," I went on, "I wouldn't be here to point out that Calcium Chloride cuts curing time in half, so you can free your pallets sooner, increase your capacity, cut costs, and . . . "

"If it's serious enough to make you miss your vacation," Bob broke in, "that's enough to convince me. I'm going to give Calcium Chloride a try. Now by the way, what was that favor you wanted?"

"Oh, that?" I replied. "Never mind. It isn't really important."

"You're holding out on me, Dod," Bob said. "Come on. What was it?"

"Well, if you *must* know . . . " I paused, grinning sheepishly, "I called to borrow your outboard motor. I thought I'd go fishing for a few weeks . . . "

—L. D. Dodson

P.S.—Our folder, "How To Make Better Concrete Products and Ready-Mix," is packed with helpful hints on the use of Calcium Chloride in concrete. To get your free copy, just drop me a line. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

Wyandotte
CHEMICALS
MICHIGAN ALKALI DIVISION
HEADQUARTERS FOR CALCIUM CHLORIDE

CLARK INTRODUCES NEW LIFT TRUCK LINE

Clark Equipment Company, Battle Creek, Michigan, announced recently it will introduce a new line of fork-lift trucks at the Materials Handling Institute Exposition in Cleveland, June 5. The new models will reflect current automotive trends by the inclusion of 12-volt electrical systems, fully automatic transmissions, emergency fuel tanks and foam rubber seats.

The Clarklift has rear steer wheels the same diameter as front drive wheels. This is said to be the first time this has been accomplished on a solid-tire fork truck. The distance from the front axle to the face of the fork has been reduced by an average of 2½ inches to permit stacking in narrow aisles, and the overall weight of the unit has also been reduced substantially.

New Continental engines designed for easy maintenance are used in all models and give solid-tire models a minimum full-load speed of eight miles per hour and gradeability of 20 to 30 per cent. Pneumatic-tire models have a full-load speed of 12 miles per hour and gradeability of 26 to 33 per cent.

Increased visibility, lift speeds 50 per cent faster than previous models, and elimination of sway and distortion are results of new uprights and hydraulic system. Roller mounted, the uprights are nested to increase vision.

Planned driver comfort is emphasized in all models of the line by a clear-through floorboard which provides spacious legroom and one-step mounting from either side. Attachment controls are located on the dashboard near the driver's right hand. Two chrome levers are mounted on the steering column; one controls direction, the other controls lift-lower and forward-reverse tilting. A four-inch adjustable foam rubber seat has a self-adjusting swivel back designed to fit a driver of any size. An extra wide brake pedal can be reached easily with either foot and the effort needed to apply the brakes has been reduced by 35 per cent.

A device on the brakes automatically maintains proper clearance between lining and drum every time the brakes are applied; when the lining is worn to a predetermined realigning point, the automatic adjustment ceases. This is indicated by the brake pedal going to a lower position when it is depressed. The only brake maintenance said to be necessary is the replacement of lining approximately every two years.

Major components such as the transmission, torque converter, dash assembly parts and most engine accessories are interchangeable on all models, thus eliminating the need for large inventories of parts. Other easy maintenance features include an exclusive spring-balanced hood which swings up 90 degrees to completely expose the engine, a power train which can be removed as a unit, a simple four-bolt floorplate over the transmission, easy-access hydraulic control valves on the dashboard, and one-quick-disconnect multiple plug for all dashboard electrical wiring.

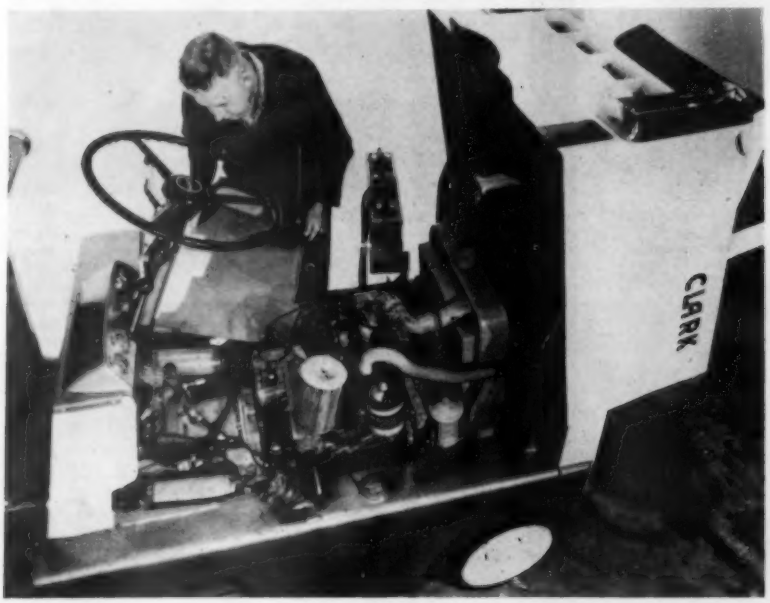
Designed for safety, the unit has two independent braking systems. Totally enclosed hydraulic brakes, mounted on the wheel pinion drive shaft at each drive wheel give 55 per cent more effective stopping power than previous models. With a brake at each wheel, braking force is not lost when one wheel is on slippery ground. Completely separate from the hydraulic brake is a mechanical seat brake which is applied automatically when the operator leaves his seat. For additional information regarding the Clarklift line write Industrial Truck Division, Clark Equipment Company, Battle Creek, Michigan.

Marietta Appointment

Jack Curtis has been appointed district sales manager of Marietta Concrete Corporation's midwestern territory according to company officials. In his new position, Mr. Curtis will supervise all sales programs of the many Marietta farm silo dealers throughout most of Ohio, Eastern Indiana and Northern Kentucky.

Yale & Towne Appointment

Richard H. Marsh has been appointed worksaver and warehouser sales manager by The Yale & Towne Manufacturing Company. He was promoted to the position from assistant sales manager of the two industrial truck lines.



Vinyl-Lined Pools Open New Block Market

Concrete block producers will want to become thoroughly familiar with the profitable business available to them, as well as the new market developing for their material, in the growing demand for residential swimming pools. Manufacturers of swimming pool equipment predict that some 30,000 new installations of permanent pools will be made throughout the country during this season.

Construction materials and methods for these pools will follow several patterns, but because of cost, durability and ease of installation a method involving block construction with a vinyl liner shows promise of winning the greatest acceptance. Suitable to any climate and characterized by both beauty and easy maintenance, this type of pool could win a generous share of any market in which its advantages are properly exploited.

A manufacturer of swimming pool equipment offers block plants complete construction details and material specifications for the excavation and masonry work required for construction of the vinyl-lined block pool. This data is compiled for use by mason contractors, and calls for materials available at block plants. To complete the pool, the manufacturer offers a custom built vinyl liner which conforms to the dimensions of the masonry walls; a high capacity light weight filter of advanced design, complete with pump and pool connection fittings; vinyl coping for edging the pool walls; ladders; and an automatic surface skimmer and pool vacuum cleaner with suction hose. This complete kit, compactly packaged in four shipping containers, totals less than 400 pounds shipping weight. With the packaged kit is included illustrated operating instructions for the owner, a generous amount of maintenance supplies, and a chlorine test kit, similar to that used in public pools for checking the sanitation of the pool.

An important selling feature of the vinyl-lined block pool is ease of construction. It does not require a solid bottom. The masonry work consists of reinforced block walls set on suitable footings. The bottom is formed from loose sand which is smoothed off at an even pitch from

● The structural portion of the pool consists of retaining walls built of reinforced concrete masonry units. The bottom consists of sand fill.

● Here the vinyl plastic liner is being placed inside the retaining walls. The liner is a packaged product that comes ready made to fit pools of a particular size.

VIBROLATOR S

MOVE CEMENT WET OR DRY

EFFECTIVE, QUIET, HARMLESS TO EQUIPMENT

When you move sand or cement, wet or dry materials—check the plus features Vibrolators offer. Instantly self-starting without fail, all-directional vibration that forbids sticking but does not harm equipment. Only one moving part—a steel ball—that needs no maintenance or lubrication. So quiet and reliable you'll bolt it on and forget it!

Write for catalog. You will also receive form for describing your problem. No obligation!

MARTIN ENGINEERING CO.
155 Concord Street **Neponset, Ill.**

"The best book on BLOCK MAKING ever published"

WILLIAM GRANT'S MANUFACTURE OF CONCRETE MASONRY UNITS

Thousands of concrete block producers have put the ideas in this book to highly profitable use. In many plants it has become a virtual "production manual" and is referred to constantly to help solve operating problems. "Let's see what Grant says about this" has become a familiar phrase among block men.

There are 19 sections in the book, profusely illustrated, covering every phase of concrete block production, including aggregates, grading and proportioning, mixing and processing, kiln construction, curing, specifications and testing, steam boilers and their care, fuels and combustion, etc.

$4.00 The only book of its kind on the subject, it is a "must" for every block producer who wants the very latest information on his work. Ideal for training new employes, the perfect refresher course for the old hand.

POS[illegible] Your copy or [illegible]es will be mailed the same day we receive your order [illegible] check.

CONCRETE PU[illegible]ISHING COMPANY
400 W. Madison Street **Chicago 6, Illinois**

GENUINE DUR-O-WAL® is a Sales Builder

• Architects specify Dur-O-wal. Builders demand Dur-O-wal. Dealer SALES on Dur-O-wal reach new highs with every season. CUSTOMER SATISFACTION couldn't be better! Yes, proved performance and economy in masonry walls the country over are the reasons why Dur-O-wal is a fast turn-over, big sales volume item for you. Stock Dur-O-wal now!

6 REASONS
why Dealers Stock Dur-O-wal

Dur-O-wal:

- **is called for by name**
- **specified by Architects**
- **is an engineered product**
- **has fast turnover**
- **is easy to handle**

Nationwide acceptance through proved performance means customer satisfaction for you

EASY TO STOCK, STORE TO USE AND TO SELL

Trussed Design
Butt Weld • Deformed Rods

DUR-O-WAL®

Write Dept. 6P today for complete information, specifications, prices and the name of the Dur-O-wal distributor nearest you.

Dur-O-wal Div., Cedar Rapids Block Co., **CEDAR RAPIDS, IA.** Dur-O-wal Prod., Inc., Box 628, **SYRACUSE, N.Y.** Dur-O-wal of Ill., 119 N. River St., **AURORA, ILL.** Dur-O-wal Prod. of Ala., Inc., Box 5446, **BIRMINGHAM, ALA.** Dur-O-wal Prod., Inc., 4500 E. Lombard St., **BALTIMORE, MD.** Dur-O-wal Div., Frontier Mfg. Co., Box 49, **PHOENIX, ARIZ.** Dur-O-wal, Inc., 165 Utah St., **TOLEDO, OHIO**

the shallow to the deep end of the pool. The vinyl liner, when placed within the retaining walls and on top of the sand bottom, easily conforms to the interior pool dimensions when the pool is filled with water. The pressure of the water against the liner gives a solid feeling of firmness to the underlying sand on the pool bottom, and a clinging-tight appearance against the masonry walls. Aside from simplicity of construction, this type of pool has the important advantage of eliminating the danger of pool bottoms cracking from changes in hydrostatic pressure.

The vinyl material, trade marked "Krene", is a product of the Bakelite Company, a division of Union Carbide and Carbon Corporation. It was developed specifically for the swimming pool application and over 10,000 such pools have been satisfactorily built in the past five years. The deterioration of this material when exposed to sunlight and wide temperature extremes is far less than for paint, plaster or any other of the materials commonly used for surface treatment of pools. Although the oldest installation is only six years old, it is believed by Bakelite that the vinyl liner itself should prove serviceable for better than a 10-year period. Replacements of liners, if ever necessary, can be made at a cost comparable to that for painting other pools.

Where construction materials, liners and other pool equipment have been made available through local block plants, professional installations of the vinyl lined block wall pool have been made with a net cost of less than $1800 to the owner for a complete 13½- by 30-foot pool. For additional construction details regarding the vinyl-lined pool, as well as information on how block-plant operators may function as distributors for what is virtually a packaged swimming pool, write Romar Filter Corporation, 1532 W. Galena Street, Milwaukee 5, Wisconsin.

Hyster Plans New Plant

Hyster Company, manufacturer of industrial lift trucks and tractor equipment, will construct a new plant in Danville, Illinois, according to an announcement recently by Eugene Caldwell, vice president and general manager. Plans now call for production to continue both at the present Danville plant and in the new facilities.

Worthington Vice Presidents

A. William Fraser and Clarence S. Wentworth have been appointed commercial vice presidents of the Worthington Corporation, Harrison, New Jersey, by the board of directors, according to an announcement by Edwin J. Schwanhausser, president.

A. W. Fraser

C. S. Wentworth

Mr. Fraser, who has been midwest regional sales manager of Worthington since 1951, is in charge of the district sales offices at Chicago, Denver, Kansas City, St. Louis and Minneapolis. Mr. Wentworth is sales manager of the central region, with headquarters at Cleveland and responsibility for the district sales offices at Buffalo, Cincinnati, Cleveland, Detroit and Pittsburgh.

National Sales Manager

H. A. Jones

The promotion of Harold A. Jones to national sales manager of Motorola Communications and Electronics, Inc., Chicago, Illinois, has been announced by Daniel E. Noble, vice president. Mr. Jones formerly was executive assistant to the national sales manager, Eugene S. Goebel, who recently was named vice president for market relations. Mr. Jones, in his new capacity, will have responsibility for implementing sales policy as well as executing sales planning and sales promotion. The function also includes sales training, advertising, and technical information services.

General Sales Manager

R. L. Rhodes has been named to succeed J. E. Sweitzer as general sales manager of the Alpha Portland Cement Company, according to a recent announcement. Mr. Rhodes has been associated with the company since 1928, first as sales representative, field engineer and assistant district sales manager, and since 1940 as district sales manager. Mr. Sweitzer retired last month after 42 years of service.

Dur-O-WaL Appointments

Cedar Rapids Block Company, Cedar Rapids, Iowa, announced two appointments recently. Carl E. Miller was named sales representative for Dur-O-waL Products of Alabama,

C. E. Miller

R. A. Potts

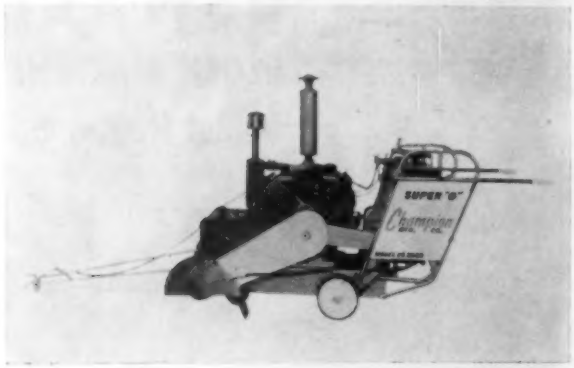
Inc. and Roy A. Potts was made sales representative for Dur-O-waL of Illinois. Mr. Miller will serve architects, dealers, and builders in the states of Texas, Louisiana, Arkansas, Alabama, Mississippi, Tennessee, Kentucky, Georgia, Florida, and South and North Carolina, while Mr. Potts' territory includes the states of Wisconsin and Illinois.

Executive Vice President

F. L. Doolittle

Fred L. Doolittle has been elected to the newly created post of executive vice president of Penn-Dixie Cement Corporation, according to a recent announcement by B. W. Druckenmiller, president. Mr. Doolittle, who has served as vice president and general sales manager since 1950, was also elected to the board of directors. At the same time L. L. Van Nest was elected vice president and general sales manager; Hugh R. Hamilton became vice president and assistant to the president; and H. L. Silcox was made vice president of operations.

EQUIPMENT & MATERIALS

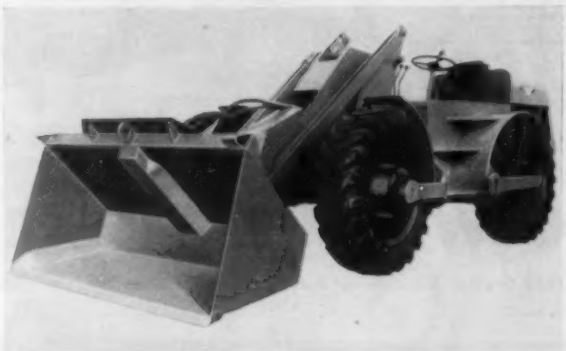


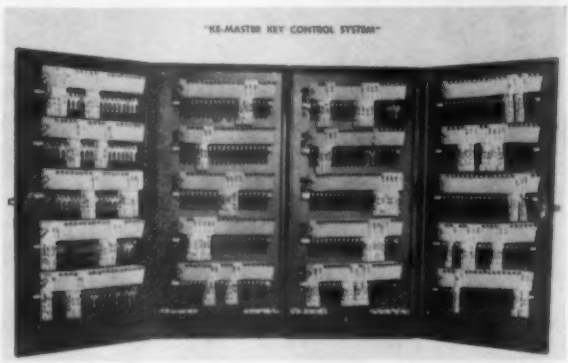
Concrete Saw

THIS self-propelled concrete saw features direct chain drive, a new development in concrete cutting that eliminates slippage and maintains constant torque. All controls on the unit can be regulated from the operator's position at the dashboard. It is available in 36-and 25-horsepower models. *Champion Manufacturing Company*, 2028 Washington Avenue, St. Louis 3, Missouri.

Front End Loader

THIS 1-cubic yard, 5000-pound capacity front end loader is said to be unique in that it will transport a full load with the bucket raised off the ground just enough to clear the terrain thus providing unimpaired operator visibility. Four-wheel steering affords the operator the ability to get around better in tight spots and rough terrain. Two-wheel oscillation permits one wheel to drop into a hole in rough terrain without loss of tractive power to that wheel. *Mixermobile Manufacturers, Inc.*, Portland 20, Oregon.



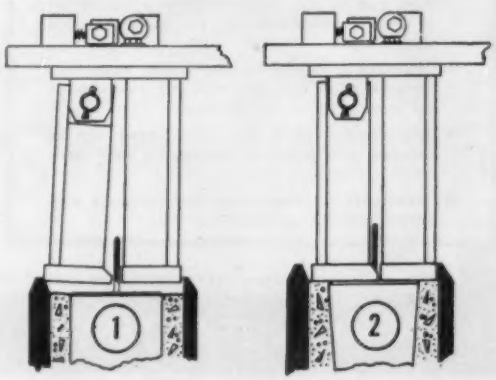


Key Filing System

KE-CABINETS are of welded steel construction and are available in sizes to suit every need. They are fitted with a lock-in-handle and piano hinge to insure proper security. Spiral wires are mounted inside the door as well as in the cabinet for full capacity. Numerical location guides provide ease in locating key positions. An alphabetical and numerical index is included for cross reference of keys. Numbered Ke-tags with snap hooks complete the system. *Cushman & Denison Manufacturing Company, Inc.*, 153 West 23rd Street, New York 11, New York.

Uni-Pressed Top

THE two drawings at the right show a new development in the manufacture of concrete block that is said to eliminate machine marks. View No. 1 shows a swinging stripper shoe contacting a thick, beveled division plate. View No. 2 shows the swinging stripper shoe after it has moved to the right to contact the stationary shoe in preparation for stripping the block. Attachments are available for 3-core, 2-core, and floor and filler block. *Besser Company*, Alpena, Michigan.



EQUIPMENT & MATERIALS

Masonry Saw

PICTURED here is a heavy-duty masonry saw with full 2-hp. continuous duty motor developing up to 4.2-hp. under load conditions for wet or dry cutting on block, refractory, tile and other types of hard and soft masonry materials. The head of the saw may be raised or lowered to any desired fractional part of an inch, within a 20-inch range. *Cardinal Engineering Corporation*, 10th and Diamond Street, Philadelphia 27, Pennsylvania.

Form Coating

THE accompanying picture shows a plywood form panel after repeated use in concrete pouring operations. The maker of the form-coating material with which it was protected calls attention to the soundness of the surface, and the freedom from checks and lifting of fuzzy end grain. *Form-Kote Incorporated*, American State Bank Building, Milwaukee 3, Wisconsin.

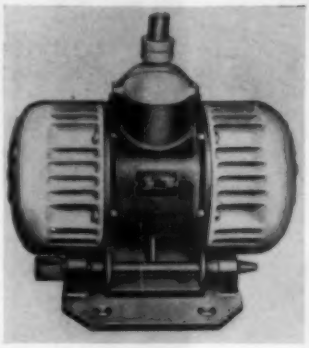
Concrete Window-Well

METAL molds have been developed for producing an attractive precast window-well unit in three heights—12, 18 and 24 inches. The rounded top edge is produced by means of a special tool furnished with each form. According to the manufacturer, the concrete units are cheaper, more durable, and more attractive than comparable steel units. *R. L. Spillman Company*, 1583 South High Street, Columbus, Ohio.

Sectional Conveyors

SECTIONAL belt conveyors in standardized, pre-engineered units with capacities up to 1,500 tons per hour are now available in 18-, 24-, 30-, and 36-inch belt widths, with 24- and 42-inch deep trusses. The components are shop assembled to facilitate installation, and they can be supplied by any one of nine plants at strategic locations throughout the country. *Link-Belt Company*, 307 North Michigan Avenue, Chicago 1, Illinois.

EQUIPMENT & MATERIALS

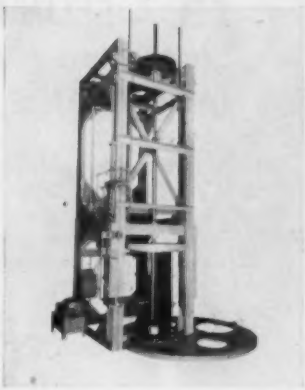


Concrete Vibrator

THE Syntron-Sinex Electromechanical concrete vibrator is said to speed the placing and setting of concrete in wall forms and other large molded products. Its 3600 vibrations per minute flow the mix solidly into corners and around reinforcing, resulting in a denser, stronger end product. The unit is totally enclosed for operation from 220 to 440 volt-3 phase, 60 cycle ac. *Syntron Company*, 324 Lexington Avenue, Homer City, Pennsylvania.

Quick Changeover Pipe Machine

THIS new model of a well-known packer-head concrete pipe machine makes sizes ranging from 6 to 36 inches in diameter and from 3 to 8 feet in length. According to the maker changes to a different length in the same diameter can be made in less than 10 minutes; changes to a different diameter in the same length in 15 minutes; and changes in both length and diameter in less than 30 minutes. *Zeidler Concrete Products Machinery Company*, P. O. Box 2368, Waterloo, Iowa.



Pneumatic Tubing

A PNEUMATIC tubing system for casting voids in concrete products is said to effect cost savings of 20 to 30 per cent in comparison with other methods of doing the same job. The tubes are available in diameters ranging from ¾ of an inch to 6 inches and in lengths ranging up to 60 feet. The manufacturer states that with reasonable care in handling and storing, the tubes can be reused at least 100 times. *Ductube Company*, Box 27073, Los Feliz Station, Los Angeles 27, California.

Manlift

REQUIRING less installation space than a conventional stairway or an ordinary elevator, the manlift pictured here is also designed to convey bags and other packed materials. It can be furnished with steps and bag carriers alone or in combination. An automatic tripping device discharges the bags at desired floor level. *Allis-Chalmers Manufacturing Company*, 981 S. 70th Street, Milwaukee, Wisconsin.

NEW LITERATURE

DUST-TIGHT ENCLOSURES—Bulletin 07B8423 contains complete information on dust-tight enclosures for floor-mounted vibrating screens, Models AVD and S. *Allis-Chalmers Manufacturing Company,* 981 S. 70th Street, Milwaukee, Wisconsin.

V-BELTS—Bulletin No. V-1400-B20-P contains numerous illustrations of Worthington-Goodyear types of V-belts available for drives employed in heavy industrial applications and miscellaneous light machinery drives. *Worthington Corporation,* Mechanical Power Transmission Sales Department, Oil City, Pennsylvania.

DRIVES—A 44-page booklet No. 20-P50 carries handy multi-color tables for easy selection of variable-speed Texrope drives. The booklet also includes information on design features, drive principles, horsepower rating tables for A, B, C, D, and E section belts, a speed-range table showing the variation in rpm when using two Vari-Pitch sheaves in combination, and accessory equipment for the Vari-Pitch drive. *Allis-Chalmers Manufacturing Company,* 981 S. 70th Street, Milwaukee, Wisconsin.

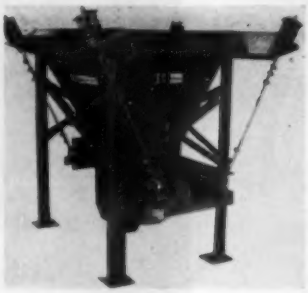
CONTROLS—This catalog will aid in the selection of automatic controls for heating and air conditioning systems, and various process applications. Operational and application data is incorporated with the description of each control. *Barber-Colman Company,* Rockford, Illinois.

FLEXICORE—Quick, firesafe, low-cost construction of one-story commercial buildings is the topic of a new 4-page booklet. The booklet gives detail drawings and schematic presentations of four typical buildings on which Flexicore precast concrete floors and roofs may be used to cut costs on firesafe construction. *Flexicore Company,* 1932 E. Monument Avenue, Dayton 1, Ohio.

FLOWMETER—Mechanical flow meters with evenly graduated charts and scales are described in specification sheet 242-2. The meter body is mounted integrally with the measuring instrument, forming a self-contained measuring system for pipe stand or panel mounting close to the point of measurement. Write *Minneapolis-Honeywell Regulator Company,* Industrial Division, Wayne and Windrim Avenues, Philadelphia 44, Pennsylvania.

EQUIPMENT & MATERIALS

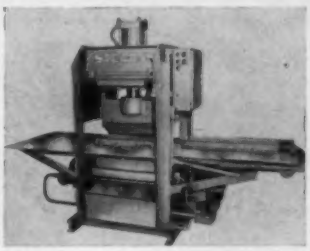
High Capacity Feeder



THIS Simplicity 1- by 6-foot Bin Hung Os-A-Veyor feeder is said to be excellent for a continuous smooth feeding of sand and gravel to the mixing elements, to bucket elevators, and to belt conveyors, depending on the plant layout. Since there is no connection between the eccentric drive and main frame or bin, overloading will cause no damage. Os-A-Veyor feeders are available with capacities to 1000 tons per hour. *Simplicity Engineering Company,* Durand 16, Michigan.

Block Splitter

THE block splitter pictured here has an automatically controlled production range of from six to twelve complete splitting cycles per minute for straight line cuts, and will accommodate block up to 8 inches in height and 24 inches in length. The unit is easily set for semi-automatic operation for all angle and special cutting. According to the manufacturer, the unit practically eliminates culls, as the block are split by equalized pressure and not struck in the conventional manner. *Stearns Manufacturing Company, Inc.,* Adrian, Michigan.



Portable Mixer

A NEW portable mixer makes it possible to mix small batches of concrete close to the point of use. It utilizes a portable electric mixing unit that is inserted into a large metal tub in much the same manner as a portable kitchen mixer. The mixing unit slides into a receptacle in the tub, and the entire mixer can be assembled in 30 seconds. The Handy Mixer is powered by a 1 horsepower motor and can be operated wherever there is a 115 volt outlet. *Master Vibrator Company,* 561 Stanley Avenue, Dayton 1, Ohio.

Fork Lift Truck

THE Model B-224 Mobilift industrial truck features powered directional controls mounted on the steering column within easy reach of the operator's fingertips while both his hands remain on the steering wheel. The unit has a turning radius of 67 inches, and a load capacity of 2000 pounds. *Lamson Mobilift Corporation,* Syracuse 1, New York.

Reading for Profit

All of the following books are available from Concrete Publishing Corp., 400 West Madison Street, Chicago 6, Ill. Prices are for cash with order and include postage.

Good Books for Concrete Men

MANUFACTURE OF CONCRETE MASONRY UNITS. By William Grant. Published 1952. 184 pages, 19 chapters, 20 charts, 18 tables. Complete operating manual of up-to-the-minute practice showing how to produce top quality concrete block at the lowest possible cost. Rated by block producers everywhere as the best book on the subject ever published. *PRICE* $4.00

CONCRETE PRODUCTS AND CAST STONE. By H. L. Childe. 272 pages, 252 illustrations. Revised 1949. Details the manufacture of precast concrete, concrete products and cast stone. Full information on foamed slag, wood-wool, consolidation by vibration and other manufacturing processes and materials. *PRICE* $3.15

MOULDS FOR CAST STONE AND PRECAST CONCRETE. By F. Burren and G. R. Gregory. 96 pages. Information on wood and plaster mold making so prepared that a novice without previous experience can make good, inexpensive molds. Large, easy-to-follow drawings with concise explanatory instructions are based on actual molds used by experienced mold makers. *PRICE* $1.60

BUILDING ESTIMATOR'S REFERENCE BOOK. By Frank R. Walker. The new Twelfth Edition, revised and rewritten. 1,780 pages containing the latest estimating and cost data on everything that goes into building construction from foundation to the finishing coat of paint. Can be used in any locality, regardless of local prices or wage scales. Included free is the new Vest Pocket Estimator, a separate book of 220 pages of up-to-the-minute estimating and cost data in condensed tabular form. *PRICE* $12.00

DESIGN AND CONSTRUCTION OF FORMWORK FOR CONCRETE STRUCTURES. By A. E. Wynn. Revised 1951. 312 pages, 229 illustrations, 9 folders, 11 design tables. Complete designs for formwork for every type of plain and reinforced concrete structure, from simple footings to arch bridges, with tables from which the sizes and quantities of timber required for any type or size of structure can be seen at a glance. *PRICE* $6.15

CONCRETE CONSTRUCTION MADE EASY. By Leslie Turner and Albert Lakeman. Reprinted 1948. 118 pages, 69 illustrations, 16 tables. A practical book that solves problems in design and erection of any type concrete structure. Full designs with tables and all necessary information for building foundations, walls, columns, floors, roofs, staircases, beams, water tanks, retaining walls, lintels, formwork, saw-tooth roofs, etc. Written clearly and plainly. *PRICE* $2.10

ELEMENTARY GUIDE TO REINFORCED CONCRETE. By Albert Lakeman. Revised 1950. 88 pages, 79 illustrations. Clarifies principles governing design of reinforced concrete for the reader who has no previous knowledge of the subject. Simple explanations are illustrated with clearly drawn diagrams that make the text readily understandable for the beginner. *PRICE* $1.60

REINFORCED CONCRETE DESIGNER'S HANDBOOK. By Chas. E. Reynolds. Revised 1951. 344 pages, 69 tables, 40 illustrations, 106 examples. A standard work of design data for everyday use. Has large, easily read design tables that cover every type of reinforced concrete structure—with fully worked examples, short cuts and simplified methods proved in practice and essential for rapid solutions of problems. *PRICE* $5.20

PRESTRESSED CONCRETE. By Kurt Billig. Published 1953. 470 pages, 119 graphs, tables and drawings, 31 illustrations. The first of three parts deals with general data and fundamentals, the second with the design of prestressed structures, the third with design problems and a number of numerical examples. Each chapter is followed by an extensive bibliography. Included is Dr. Billig's proposed Code of Practice for prestressed concrete. *PRICE* $9.00

PRESTRESSED CONCRETE STRUCTURES. By August E. Komendant. Published 1952. 261 pages, 124 graphs, drawings and tables, 34 illustrations. A comprehensive discussion of prestressed concrete in a brief and simple form for the use of men in the field as well as those engaged in research. Covers general considerations; physical properties of materials; changes of forces and stresses due to plastic flow and shrinkage; and representative prestressed structures. *PRICE* $6.00

PRESTRESSED CONCRETE. By Gustave Magnel. Revised 1954. 345 pages, 328 illustrations. Contains both the theories of prestressing and examples of its use. Chapter subjects include: the principle of prestressed concrete; methods of prestressing; statically determinate beams; continuous beams; tests; creep of steel and concrete; buckling during prestressing; effect on prestress of time and superimposed load; permissible stresses; applications of prestressed concrete; and prestressed precast concrete. *PRICE* $8.00

PRINCIPLES AND PRACTICES OF PRESTRESSED CONCRETE. By P. W. Abeles, D. Sc. (Vienna) and member Institute of Structural Engineers. First American edition, with all notations adapted to the American standard. Textbook of 112 pages which discusses thoroughly the elementary principles of prestressed concrete as well as its applications in practice. *PRICE* $3.75

DESIGN OF PRESTRESSED CONCRETE STRUCTURES. By T. Y. Lin. New 1955. 456 pages. 242 illustrations. Comprehensive coverage of all phases of prestressed concrete structures, emphasizing American methods and conditions. Formulas, tables and graphical methods are so introduced that both preliminary and final designs can be made with ease. Costs of prestressing are also considered and prestressed lift slabs and pretensioning products are described. *PRICE* $11.50

SIMPLIFIED MASONRY PLANNING AND BUILDING. By J. Ralph Dalzell. New 1955. 376 pages. 182 illustrations. Practical, step-by-step guidance for planning and building all common types of concrete, concrete block, stucco and similar masonry structures. Includes basic information on cement, concrete and mortar. *PRICE* $5.00

CONCRETE SURFACE FINISHES, RENDERING AND TERRAZZO. By W. S. Gray and H. L. Childe. Reprinted 1948. 124 pages, 132 illustrations. Detailed descriptions of every practical method of finishing concrete and improving the appearance of old and new concrete structures. *PRICE* $3.10

THE TECHNOLOGY OF CEMENT AND CONCRETE. By Robert F. Blanks and Henry L. Kennedy. New 1955. 422 pages. 155 illustrations, charts, tables and graphs. In logical order and clear, simple language it covers the known facts about the materials used in concrete and their concrete-making qualities. Main emphasis is on portland cement and aggregates, with a special effort to include data on which information is not readily available elsewhere. *PRICE* $11.00

EQUIPMENT & MATERIALS

Hydraulic Cutter

THE Model MC-210 Manco hydraulic cutter is said to be ideal for production cutting of coiled wire, trimming off cobbled ends, taking test samples and splitting bundles. It has a ½-inch diameter capacity with an operating cycle of ½ second per cut and weighs 13 pounds. Available in two other models, the units are powered by a Manco 5 hp. series "H" Hi-Thrust electric hydraulic pump. *Manco Manufacturing Company*, Bradley, Illinois.

Fork Lift Truck

ACCORDING to the manufacturer, a powerful torque transmission permits for the first time "inching" of a fork truck and the simultaneous fast lifting of loads and operation of attachments. Marked lower silhouette lines, a clear floorboard, water-proof instruments grouped in the lowered cowl, and a recessed driver's seat are some of the features of the new line. *The Yale & Towne Manufacturing Company*, 11000 Roosevelt Boulevard, Philadelphia 15, Pennsylvania.

Hour Log

THIS precision-built instrument is said to provide an accurate operating record for portable and stationary engines. The unit, called Engler D.C. Hour Log, operates on direct current and tells exactly how long each piece of equipment has been operating. The simplified design is said to permit reading at a glance. *Engler Instrument Company*, 250 Culver Avenue, Jersey City, New Jersey.

Wire Reinforcing

ACCORDING to the manufacturer of Keywall reinforcing for masonry construction, cracks resulting from a combination of restrictive forces and shrinkage can be significantly reduced by its use. Tests indicate that the lateral strength of masonry walls may be increased from twenty-five to sixty-five per cent, depending upon the amount of the reinforcing used. Supplied in rolled form, the material can be cut and lapped at corners without increasing thickness of mortar joints. Write *Keystone Steel & Wire Company*, Peoria 7, Illinois.

CLASSIFIED ADVERTISING RATE: $10.00 per column inch.

Closing date for classified advertising copy is 15th of the preceding month.

BLOCK PLANT FOR SALE

Fully equipped with Columbia automatic machine in excellent condition. Can be shown in operation. Will sell with land or lease land.

C. STARKWEATHER & SON, INC.
Beaver Dam, Wisconsin

FOR SALE

Two 1949 K-B-8 International Tandems with 5-yard mixers, $2,500.00 each.
One 1949 GMC Tandem, 3-yard Smith mixer, $1,500.00.

LEMAY CONCRETE BLOCK CO.
Ask for Mr. Detmer
7900 Reilly St. Louis 11, Mo.
Phone: Flanders 1-9940

PRICED FOR QUICK SALE

2-block Lith-I-Bar machine with 28 cubic foot mixer, racks and pallets, attachments to make 2", 4", 8" and 12" block and 50-foot aggregate elevator. Will sell as a unit only.

NATIONAL BLOCK COMPANY
3900 Ford Road Plymouth, Michigan
Phone: Parkway 1-4050 (Call Collect)

FOR SALE

One 5 H.P. 730 Rpm. motor.
One 7½ H.P. 1160 Rpm. motor.
10x16" New Holland Roll Crusher, 3x5 ft. Universal Vibrating Screen.

GEORGE SAUNDERS & SONS CO.
Box 1131 Huntington, W. Va.

FOR SALE

Besser Vibrapac with Bergen front pallet feeder. Reasonably priced. Good operating condition. May be seen at Wm. F. Koenig Co., Cincinnati, Ohio. Being replaced by a GOCORP "Trustee" block machine. Contact Koenig Co., Emil Koenig, President, or GOCORP, Adrian, Mich.

WANTED

Concrete products plant superintendent, civil engineer or mechanical experience required. Latest Besser equipment, joist plant and precast lintels, beams and columns. Salary commensurate with ability — pension and profit sharing plan.

FOSTER BUILDERS SUPPLY CO.
P. O. Box 535
10th & Water Sts.
Port Huron, Michigan

PLAIN PALLET CLEANING

We truck our machine to your plant and supervise entire cleaning and planing off of pallet residue. No need to shut down as we will keep up with production.

EDWARD A. LOBSTEIN
5363 Seminole Ave. Detroit 13, Mich.
Phone: Walnut 2-1135

FOR SALE

Where is and as is — complete ready mix plant consisting of the following.

1—Butler cement plant, 600 barrel capacity, with under-track screw conveyor and bucket elevator.

1—40 H. P. Kewanee oil-fired boiler, complete with oil-storage tank and water-storage tank.

1—200 gallon per minute Automatic Liquid Meter Company water weigh batcher.

1—3 compartment Blaw-Knox aggregate bin with collecting hopper and three beam scales; top beam 8000 pounds, both remaining beams, 5000 pound capacity.

1—Blaw-Knox 200 gallon per minute automatic water weigh batcher.

1—Johnson 2 compartment aggregate bin with clamshell gate, but no hopper or scale.

Price of complete unit — $19,350.00
Available Immediately — Retail Facilities on Site.

11—3 cubic yard truck mixer units (5 Smith and 6 Rex) some mounted and some unmounted. Spare engines. Prices available upon request.

All of above listed items subject to prior sale. Terms cash.

Equipment available for inspection at:

FRUIN-COLNON CONTRACTING CO.
2000 St. Clair Avenue
East St. Louis, Illinois

INVENTORS AND MACHINE DESIGNERS

National manufacturer is desirous of obtaining manufacturing and sales rights on any equipment or improvements used in concrete products plants on a royalty or outright purchase basis. Patents not essential. Protection guaranteed.

Address: Box E-4, care CONCRETE
400 W. Madison St., Chicago 6, Ill.

BESSERS FOR SALE

Two Besser Vibrapacs recently overhauled and in good operating condition. Attractively priced for quick sale. Can be seen in operation now at National Cement Products Co., 2930 Wayne St., Toledo, Ohio, before being replaced by two GOCORP "Trustee" block machines. Phone or write National at Toledo, Cloyd Fellabaum, President, or GOCORP at Adrian.

THE GENE OLSEN CORP.

ADRIAN, MICHIGAN

SWAP — SELL — BUY

BLOCK MACHINES

Stearns #7 & 9 Joltcretes .....$500.00 each
(Joltcrete owners at this price buy one for spare parts.)
Mold Boxes #7 & 9 ..... 150.00 each
2—Stearns Clipper Strippers ..... 250.00 each
1—18 ft. Stearns Skip Hoist 450.00
1—George 28 cu. ft. Concrete Mixer 750.00
1—Continuous Mixer 150.00
2—Air Offbearers Stearns #7 & 9 .. 250.00 each
2—Hand Lift Trucks ..... 175.00 each
1—Truckman Platform Lift-4000 lb. capacity. Excellent Condition. ..$450.00
1—40 cu. ft. Stearns Skip Loader 1000.00
100— Racks for cored steel pallets . 10.00 each
100,000 pressed steel pallets in stock
(Send tracing or sample for quotation).

WRITE ● WIRE ● PHONE
Mr. McCaughey

Send in list of equipment you need. If we don't have it in stock, we usually know where we can find it at a bargain.

GENERAL ENGINES CO., INC.
Route 130 Thorofare, N. J.
Phone: Tilden 5-5400

IMPORT GRAY PORTLAND

CEMENT

Guaranteed to meet ASTM C-150-53 Type 1 Specifications. Also import Clinker Cement

Phone or Write for Quotations

ESTABLISHED 1873
Woodward & Dickerson Inc.

1400 SOUTH PENN SQUARE • PHILADELPHIA 2, PA., U. S. A.
Cable Address: "Woodward" **Telephone: LOcust 4-5600** *Teletype: PH 109*

CEMENT-SPLIT STONE
COLORS
ALKALI AND LIME-PROOF

Special Service to manufacturers of concrete products with a full range of colors that are Guaranteed Permanent — Fadeless. Write today for Prices.

LAMBERT CORPORATION
HOUSTON, TEXAS • ORLANDO, FLA.

FOR SALE

All equipment for complete block plant new in 1954. Used only few months, as good as new, $6,000.00. Praschak "400" two 8x8x16 at a time, $5454.00. Kent Flomaster mixer 16, serial 483129, 28 racks, 1500 8" pallets, 600 4" pallets, boiler with stoker, gas-electric platform lift truck, Hobart air compressor 3 H.P., Smith 200-amp. electric welder, gas welding outfit, hand lift truck.

All equipment for complete tile plant, 4" to 16" Dunn Model D-2 15 H.P. speed reduction drive, everything you need for $3,000.00.

GREENVILLE CONCRETE PRODUCTS, INC.
Phone 1395 Greenville, Ohio

E. L. CONWELL & CO.

Established 1894

ENGINEERS • CHEMISTS

INSPECTORS

Cement, Chemical and Physical Laboratories
Tests of Cement, Concrete, Sand,
Steel, Cement Block, Cement Brick.
Chemical Analyses of All Commercial
Products. Complete Technical Supervision
of Central Mixed Concrete Plants.

2024 ARCH ST. • PHILADELPHIA, PA.

COLORS

For Cement and Concrete

COLOR YOUR CONCRETE WITH LANSCO CEMENT COLORS, available in 40 ATTRACTIVE shades. Suitable for all types of concrete products. Write for our new color card, copy of "Suggestions For Using Cement Colors," and for free samples and price list.

Manufactured by:

LANDERS-SEGAL COLOR CO.
76 Delavan St. • Brooklyn 31, N. Y.

SALES ENGINEERS WANTED

Manufacturer of block plant machinery and equipment, marketed nationally, has several territory openings offering good immediate earnings, excellent future potential. Experience selling to block plants desired. Write in confidence, sending complete resume of experience and personal data.

Address: Box E-9 care CONCRETE
400 W. Madison St., Chicago 6, Ill.

FOR SALE

Stearns Model 50-1 two-block automatic with magnetic offbearer, pallet return, 4", 8", 12" and flue molds; 1,500 ¼x18x18" steel pallets; 56-60 block racks; 28' mixer and skip hoist. Lith-I-Block L-3 two-block with offbearer and 4, 6, 8, 10, 12" and flue attachments. Go-Corp "Prince" two-block automatic with offbearer, 4, 8, and 12" attachments. Multico Model 2 automatic with offbearer, 4, 6, 8, and 12" molds. Van-U-Matic two-block with offbearer, compressor, 4, 6, 8, and 12" molds, 1,050 18x18 pallets.

MID-ATLANTIC EQUIPMENT RESALE CO.
P. O. Box 273
Front Royal, Va.

USED BLOCK MACHINES

Stearns Zipper—Jefferson, Wisconsin.
Kent Blockmaker—Saginaw, Michigan.
Two-block Van-U-Matic molds, offbearer and steel plain pallets. $1,500.00—Aberdeen, South Dakota.
Two-block Praschak with 4"-8"-10"-12" molds and pallets. $1200.00.
Stearns Clipper—Conoquenessing, Pennsylvania.
Three-block plain pallet Flam machine, reasonable—Chatham, Ont., Canada.
Besser K-12 with mixer, 3000 steel plain pallets and steel racks $2500.00 complete — Cannon Falls, Minnesota.
Two-block plain pallet Multico complete with molds, offbearer, pallets and racks, $500.00 down—Mankato, Minnesota.
Joltcrete No. 9 still operating—Rockford, Ill., Durham, Ont., Canada.
Joltcrete No. 7—Quincy, Ill., Two Harbors, Minn.
Hydro-Korpac—La Porte, Indiana.
Flemings—Lith-I-Blocks—Columbias.
I also have on hand quite a supply of cored pallets, modular and full size, a few used mixers, boilers, conveyors and bucket elevators. Also I list a few plants that want partners with a little cash and lots of experience.

MID-WESTERN CONCRETE EQUIPMENT CO.
Mattoon, Illinois

Pipe Concrete Forms & Vibrators

GEORGE W. HOFFMANN CO.
P.O. BOX 452 SIOUX CITY, IOWA
and
THE VIBRAPIPE EXPORT CO.
50 BROAD ST. NEW YORK, N. Y.

Free For The Asking!

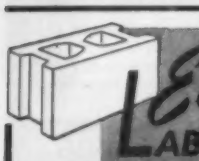
SMITHKO'S

NEW CEMENT COLOR CARD showing 22 of our industry's strongest, distinctive shades. Our 65 limeproof colors have been the standards of comparison for all cement applications for nearly forty years. Samples, technical brochure and quotations on request.

SMITH CHEMICAL & COLOR CO., INC.
JOHN & JAY STS. BROOKLYN 1, N.Y.

NR Plastic

1 TABLESPOON OF DRY POWDER Per Bag of Cement Produces
Greater Plasticity
IN THE GREEN UNIT *Plus*
20% Lighter Color
COST—1/2¢ per Bag of Cement!



Edick LABORATORIES
427 W. National Ave.
Milwaukee 4, Wisconsin

A "FIRST CLASS" DRAIN TILE MANUFACTURING BUSINESS

YOURS — FOR LESS THAN $500.00
Let Us Tell You HOW
Write for free Booklet on—
The MARVEL Drain Tile Machine
CONCRETE MACHINERY COMPANY, Inc.
HICKORY 2, NORTH CAROLINA

ADVERTISERS IN THIS ISSUE

THE EDITOR'S PAGE

WILLIAM M. AVERY

Time for the Thunderbird

IN the dozen or so years we have been intimately acquainted with the concrete block industry its product has gained wide acceptance in virtually every market that is open to masonry materials. In that period production has soared from about 500 million units to well over 2 billion units annually, and there seems no reason to believe that this growth pattern cannot be sustained in the years ahead.

But we believe there is one basic attitude toward the product that must be dropped by the wayside if the present rate of market growth is to continue. We refer to the basic, never-quite-abandoned concept that block is a cheap, austere material which can be sold only on the basis of a cost advantage to the purchaser. This was undoubtedly true during the early years when the block industry's product was the Cinderella of the building materials field.

But today the score has changed radically, and block need no longer be sold on price alone, if the seller has the gumption and the wit to develop a more imaginative sales approach. We believe that part of the solution must be worked out through upgrading the product itself, a step that seems to require mainly just a change in point of view. Better production controls, better selection and grading of aggregates, better machine maintenance, better use of color and texture, and higher standards of inspection right up to the moment our product is embedded in mortar, would go far toward erasing any remaining holdover of the Cinderella stigma.

Back in 1923 the Ford Motor Company was in much the same predicament. Ford considered himself pledged to the idea of selling the masses a cheap, stripped-down utility vehicle and he turned a deaf ear to pleas from his dealers to redesign and upgrade the Model T. He failed for a time to realize that the interest of the consumer had shifted from price to style, and that the masses would no longer buy an austere, colorless automobile just because it was cheap.

We believe large segments of the block industry are suffering from the same myopia that almost wrecked the Ford empire. We have opposed and resisted the half-high unit because it couldn't be made as cheaply as the 8-inch block — choosing to ignore the fact that the consumer was perfectly willing to pay for the former because he preferred it. We have been slow to adopt color and to produce split units because these innovations also increase the cost of our product — again ignoring a veritable mountain of evidence that the market was ready and waiting for just such improvements.

Happily the block industry has already stopped trying to market its equivalent of the Model T — the rock face unit. We've got a Model A now, and it's a good product, though a bit deficient in the glamour department. Isn't it perhaps time now for the Thunderbird?

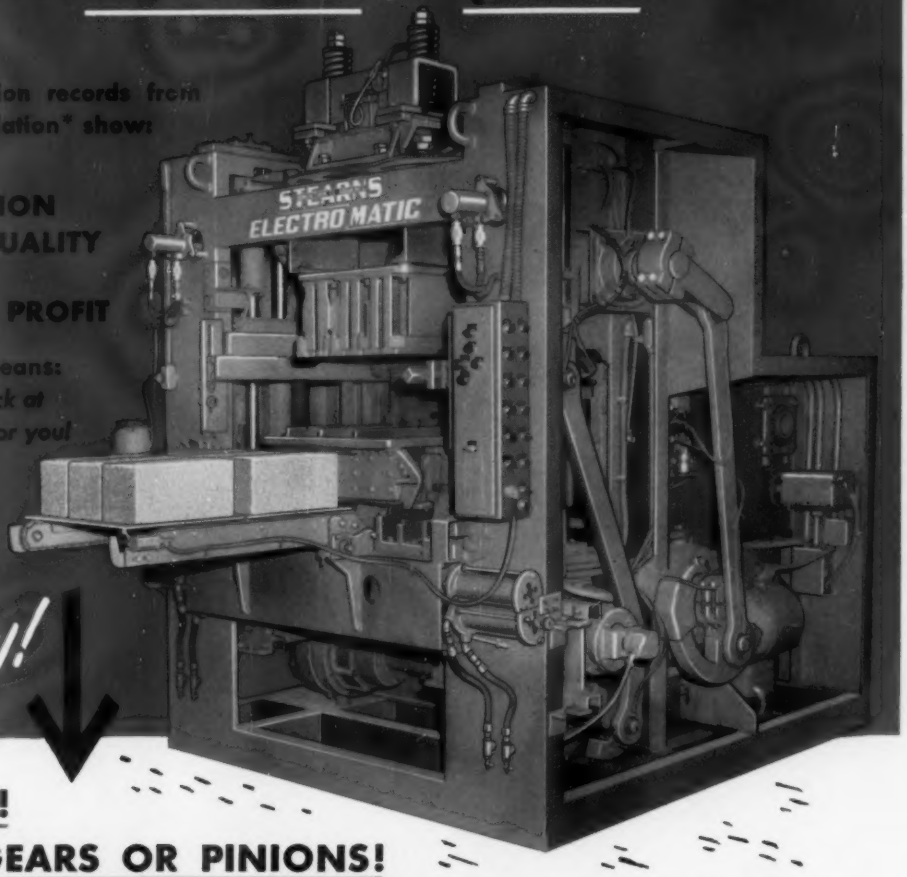
The STEARNS ELECTRO MATIC is breaking all records!

FOR... PRODUCTION and QUALITY

Actual production records from the latest installation* show:

- ★ HIGHER PRODUCTION
- ★ BETTER QUALITY BLOCK
- ★ GREATER PROFIT

Which simply means: *More quality block at lower unit cost, for you!*



...and here's why!

NO CAMS!

NO OPEN GEARS OR PINIONS!

The newest *proven* concept of power application in block machines for *faster* cycling.

Individual, motor driven, enclosed gear units, provide crank controlled harmonic motion to all functional machine movements, for rapid acceleration and deceleration, and smooth sequence operation. Gear units are interchangeable, with gear running in sealed oil bath for trouble-free operation and service . . . slashes maintenance costs! UNIFORM COMPACTION IN *ALL* COMPARTMENTS with Stearns unidirectional dual shaft vibration, stationary mounted, with TWIN 7½ HP 3500 RPM motors. The ELECTROMATIC can be easily converted to 12 inch, or 4 inch high units . . . added protection on your investment, for the growing specialty market. Write today for full information.

*Location furnished upon request.

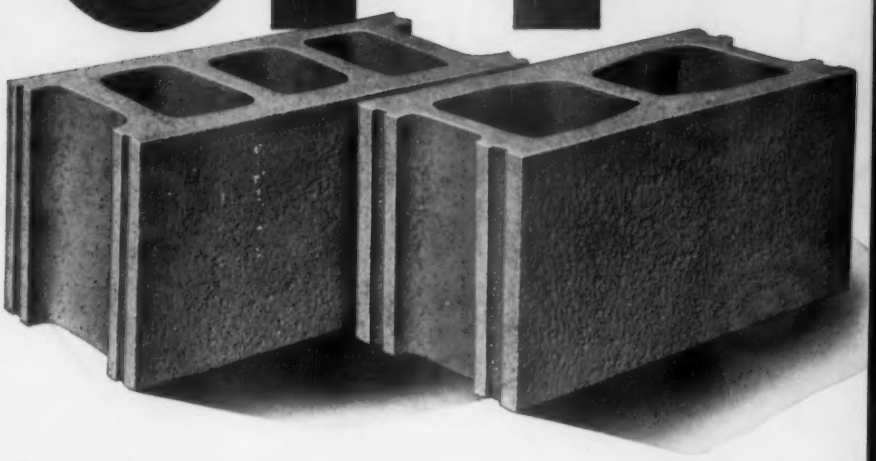
STEARNS

MANUFACTURING COMPANY · INC.

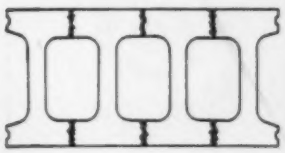
ADRIAN, MICHIGAN, U.S.A.

COMPLETE CONCRETE PRODUCTS PLANT EQUIPMENT

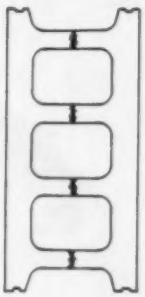
UPT



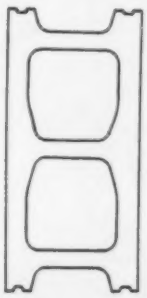
Evolution of the PERFECT BLOCK



1924 — Besser introduced the Plain Pallet Stripper Tamper. Core plate marks were visible on the top face of each block.



1936 — Besser turned the block around, thereby moving the core plate marks to the center of the web. This was a great improvement.



1955 — Besser swung the stripper shoes UNDER the core plates, thereby eliminating ALL core plate marks on the block.

Now! Besser Gives You UPT— a Block with 100% PRESSED TOP

The Besser policy of continuous improvement is again illustrated in the block with Uni-Pressed Top. This revolutionary new feature incorporates swinging stripper shoes which create a 100% PRESSED TOP. All six sides of the block now have improved texture.

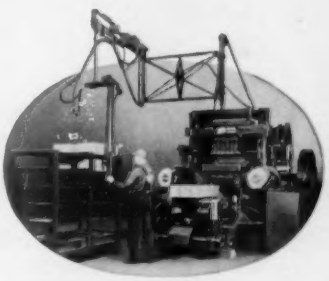
How is this accomplished? Very easily and very effectively. The stripper shoes swing under the raised core plates to form a direct contact with the other stripper shoes. In effect, each pair of shoes becomes ONE and presses the entire area of block surface. The higher division plates perfect edges and corners by pressing more material at these points.

FLOOR AND ROOF PLANK — The UPT feature is ideal for producing floor and roof plank because grinding of contacting surfaces is reduced to a minimum.

SOFFIT BLOCK — The UPT feature eliminates the core plate marks. Saves labor previously spent in preparing block for use. Greatly improves appearance of exposed ceilings.

PLAIN END OR CORNER BLOCK — With UPT, the core plate mark is now completely eliminated on the end of block. Perfects corners of buildings and ends of walls.

Investigate UPT for your plant. Get facts from your Besser representative, or write:



BESSER VIBRAPAC — the fully automatic concrete block machine. Produces high quality masonry units, of any desired texture and density, at the lowest possible cost.

A 8814-1PBC

BESSER COMPANY

World's Leading Manufacturer of Concrete Block Machinery

ALPENA, MICHIGAN, U. S. A.